KENWOOD

AV CONTROL CENTER

C-V500

INSTRUCTION MANUAL

KENWOOD CORPORATION

Model availability and features (functions) may differ depending on country and sales area.

B60-3221-00 (CH) (K,P,Y) [MC]
98/12 11 10 9 8 7 6 5 4 3 2 1 97/12 11

2 Before applying power

⚠ *Caution : Read this section carefully to ensure safe operation.*

Units are designed for operation as follows.

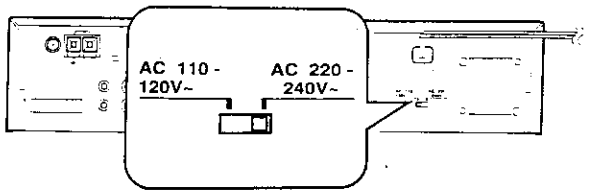
U.S.A. and Canada ..... AC120 V only
**Other countries ..... AC 110-120/220-240 V switchable*

*AC voltage selection

The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC voltage selector switch



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Safety precautions

⚠ *Caution : Read this section carefully to ensure safe operation.*

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

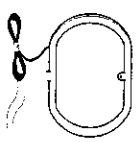
Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

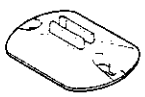
Accessories

FM indoor antenna (1)

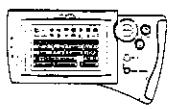
AM loop antenna (1)



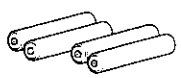
Loop antenna stand (1)



Graphical Remote Control unit (1)



Batteries(R03/AAA) (4)



Cable tidy (2)

*AC plug adaptor (1)

*Use to adapt the plug on the power cord to the shape of the wall outlet. (Accessory only for regions where use is necessary.)

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Special features

True home theater sound

Dolby Digital (AC-3)

The DOLBY DIGITAL (AC-3) mode lets you enjoy full digital surround from software processed in the Dolby Digital (AC-3) format. Dolby Digital (AC-3) provides up to 5.1 channels of independent digital audio for better sound quality and more powerful presence than conventional Dolby Surround.

Dolby Pro Logic & Dolby 3 Stereo

This surround system reproduces theater-like surround sound from video software marked DOLBY SURROUND.
The PRO LOGIC mode uses the built-in adaptive matrix circuit to steer the Left, Center, Right and Surround channel audio signals.
The 3 STEREO mode will redirect the surround signal to the front left and right speakers when only the front and center speakers are used.

New DSP surround modes

The DSP (Digital Signal Processor) used for this AV CONTROL CENTER incorporates a variety of high quality adjustable sound fields, like "ARENA", "JAZZ CLUB", "STADIUM", "CATHEDRAL" and "THEATER", to add the "presence" associated with an arena, jazz club or stadium (etc.) to the original signal. It is compatible with almost any kind of program source.

Graphical Remote Control unit "GRC"

The GRC unit incorporates a large-screen LCD which displays key icons and parameters. The LCD also shows information on the operating modes of the main unit.
To improve the operability, frequently used icons are located in the higher hierarchy in the LCD display and icons which are associated between each other are shown on the same screen.
The GRC unit is a multi-function remote control unit which can be programmed to control AV components from other manufacturers than KENWOOD.

ONE TOUCH OPERATION

Simply pressing the play key of the CD player or cassettedeck turns the system on and starts playback.

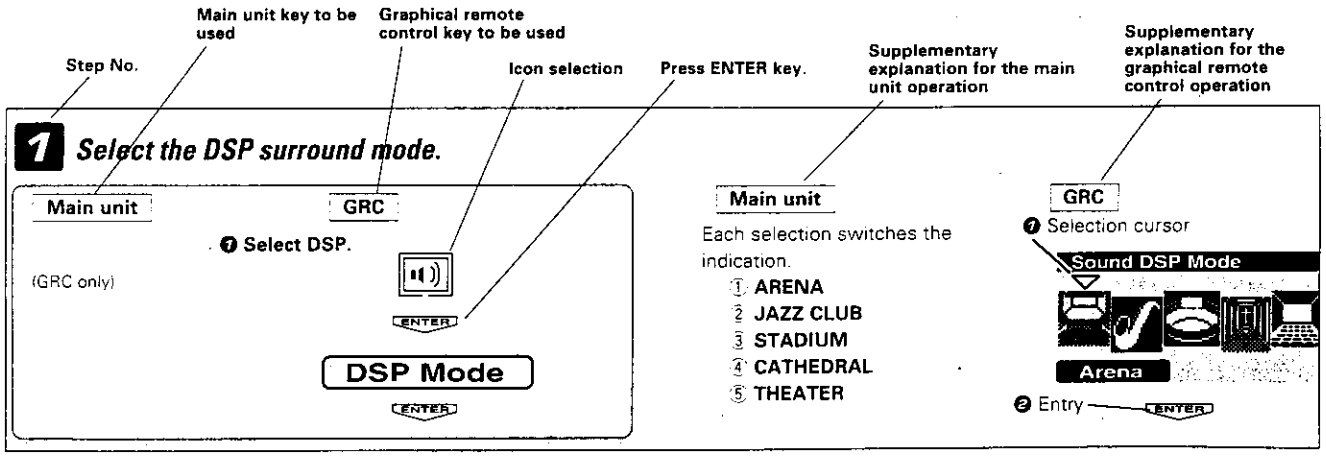
How to use this manual

In this manual, the operating procedures are described on the left half of each page and the supplementary explanation, display information and other notes on each step are described on the right half.

(Example of instructions in this manual)

Operating procedure steps (Left half)

Supplementary explanation (Right half)



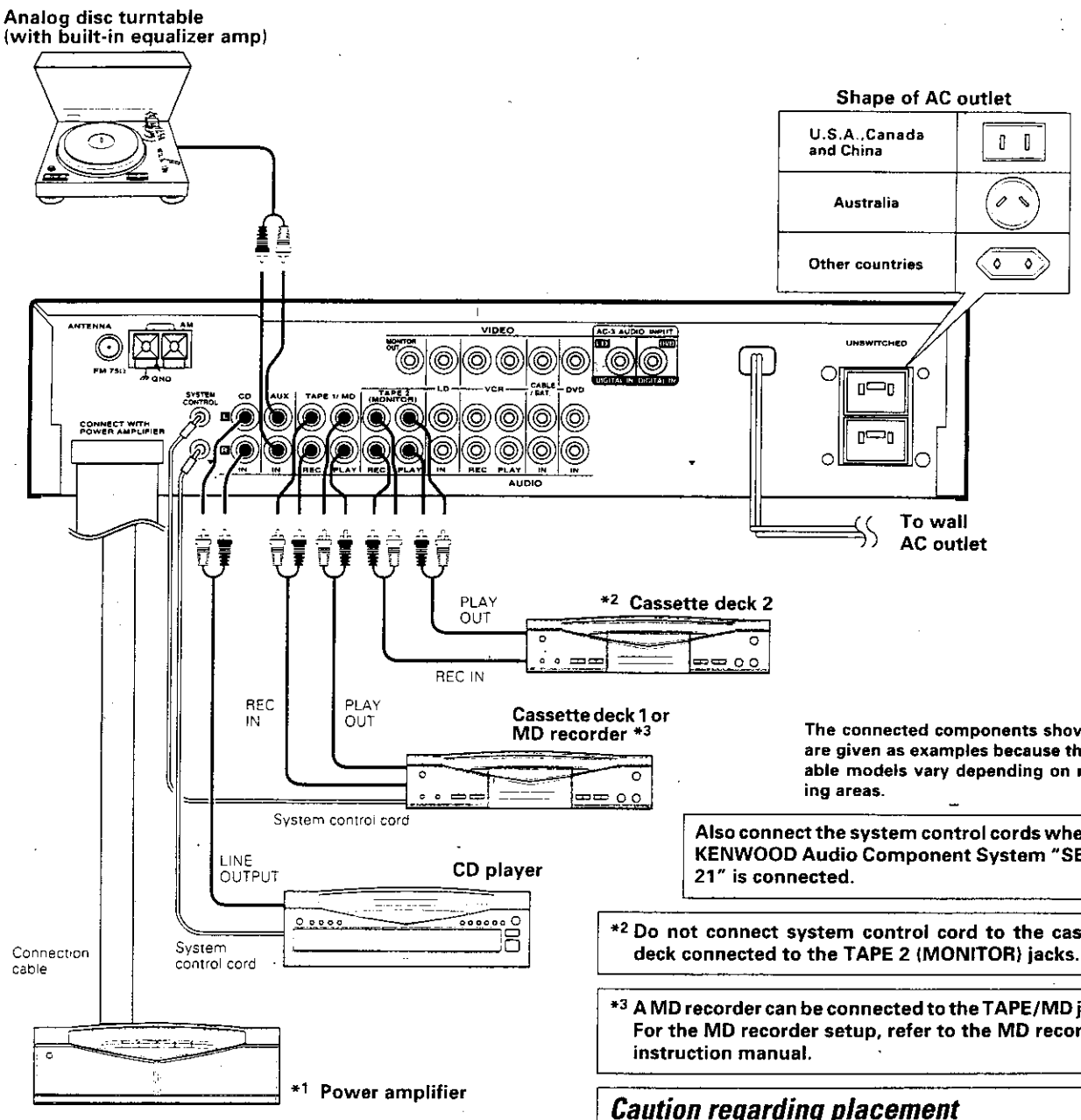
Connection of audio components *(CD player, cassette deck, power amplifier)*

Make connection as shown below.
When connecting the related system components, refer also to the instruction manuals of the related components.

⚠ Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty". – 52



The connected components shown here are given as examples because the available models vary depending on marketing areas.

Also connect the system control cords when the KENWOOD Audio Component System "SERIES 21" is connected.

*2 Do not connect system control cord to the cassette deck connected to the TAPE 2 (MONITOR) jacks.

*3 A MD recorder can be connected to the TAPE/MD jacks. For the MD recorder setup, refer to the MD recorder's instruction manual.

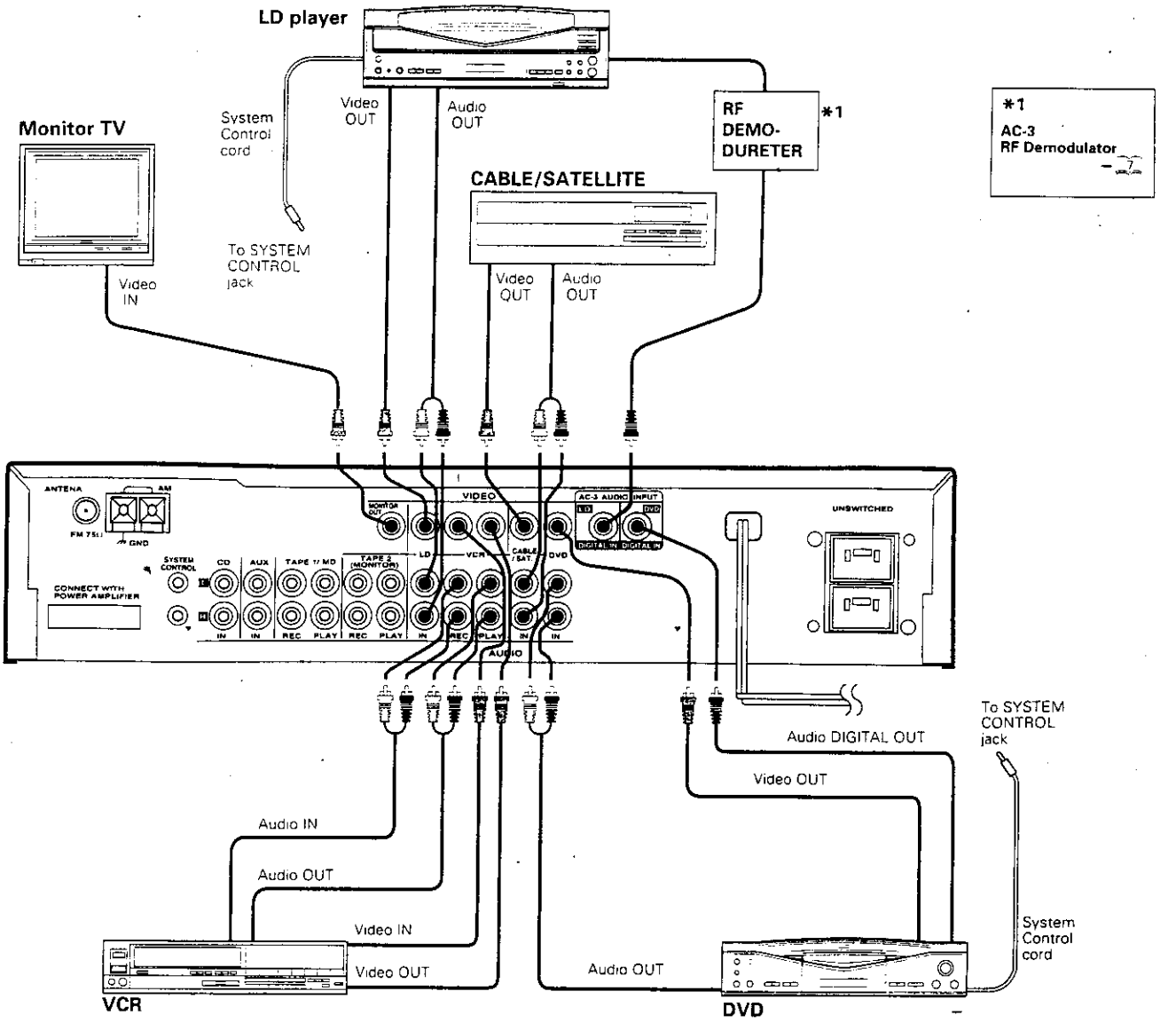
*1 For the connection and operation procedures of the power amplifier and speakers, refer to the instruction manual of the power amplifier (M-A300 or M-A100).

Caution regarding placement *(Except for U.S.A. and Canada)*

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.

Left and right panels:	10 cm
Rear panel	: 10 cm
Top panel	: 50 cm

6 Connection of video components (LD player, VCR, cable/satellite tuner, DVD)

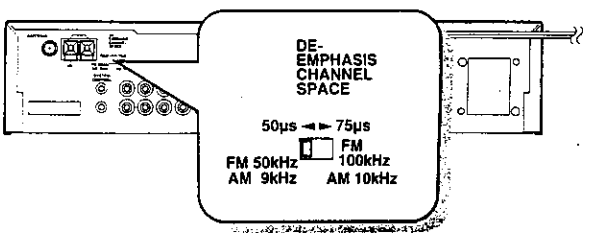


The connected components are given as examples because the available models vary depending on marketing areas.

FM DE-EMPHASIS / CHANNEL SPACE switch
(Except for U.S.A., Canada and Australia)

The FM DE-EMPHASIS / CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS / CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you moved from area 1 to area 2 or vice versa, desired reception of AM / FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS / CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

- When changing the setting of the FM DE-EMPHASIS / CHANNEL SPACE switch, first disconnect the power cord of the amplifier, then reset the channel-space switch, connect the power cord again, and turn the power on.



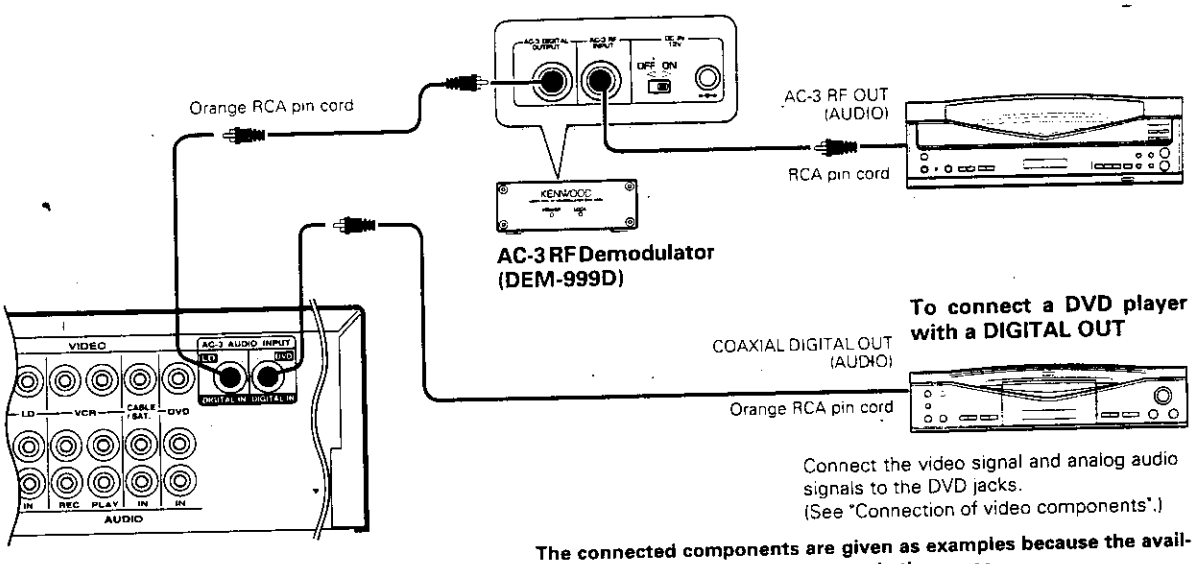
	Area	CHANNEL SPACE freq.	FM DE-EMPHASIS
1	U.S.A., Canada, Hawaii, South American countries	FM: 100kHz AM: 10kHz	75 µs
2	Other countries	FM: 50kHz AM: 9kHz	50 µs

Digital connections

Make connections as shown below.
The digital in jacks can accept either Dolby Digital (AC-3) or PCM signals (the input signal type is detected automatically).
When connecting the related system components, be sure to also refer to the instruction manuals supplied with the components you are connecting.
Do not connect the power cord to a wall outlet until all connections are completed.

Connect components capable of outputting Dolby Digital (AC-3) or standard PCM format digital signals.

To connect an LD player with a DIGITAL RF OUT.
Connect the LD player to the KENWOOD RF digital demodulator (DEM-999D).
Then connect the demodulator to the AC-3 AUDIO INPUT DIGITAL IN.
Connect the video signal and analog audio signals to LD jacks (See "Connection of video components".)

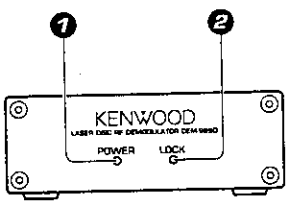


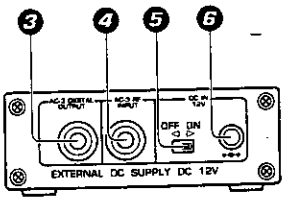
To connect a DVD player with a DIGITAL OUT

Connect the video signal and analog audio signals to the DVD jacks.
(See "Connection of video components".)

The connected components are given as examples because the available models vary depending on marketing areas.

AC-3 RF Demodulator DEM-999D





❶ POWER indicator
Lights (red) when the power switch (❺) is set to ON.

❷ LOCK indicator
Lights when an AC-3 RF signal is input to the AC-3 RF INPUT jack (❹).

❸ AC-3 DIGITAL OUTPUT (coaxial)
Connect this jack to the LD, AC-3 AUDIO INPUT (DIGITAL), jack on your AV CONTROL CENTER.
It outputs AC-3 coaxial digital signals when the POWER (❺) is set to ON and an AC-3 RF signal is input to the AC-3 RF INPUT jack (❹).

❹ AC-3 RF INPUT
Connect this jack to the AC-3 RF OUTPUT jack on your LD player.

❺ POWER switch
Use to switch the power ON/OFF.

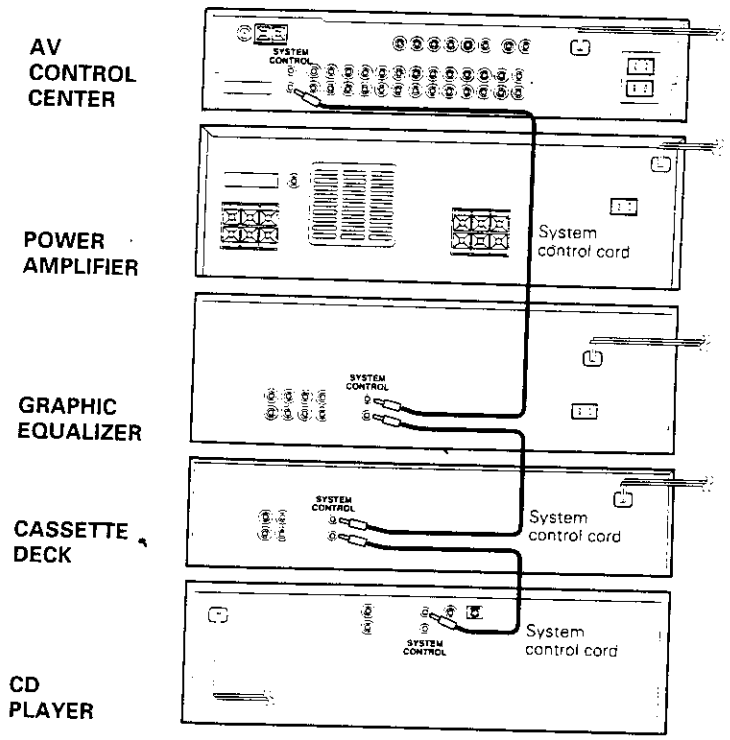
❻ DC IN (12V) jack
Connect this jack and inlet power cord to the AC adaptor supplied with your demodulator. Connect the power cord to a wall outlet after completing all of the other connections.

Place the power supply away from the demodulator, AV CONTROL CENTER, and any antennas.

8 About the system control connections

When this unit is connected to KENWOOD audio component system "SERIES 21", also connect them through the system control cords to allow system-control operations between components.

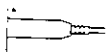
Connection example



The SERIES 21 components which can be system-connected with this unit include the LD player, MD recorder and DVD player.

Notes

1. Do not connect the SERIES 21 components to other system components using system control cords.
2. Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
3. Be sure the system control plugs are inserted all the way in to the system control terminals.



About the system control operations

(Available operations when SERIES 21 components are connected through system control cords)

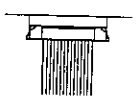
Remote Control
Lets you operate source components with the system remote supplied with this unit.

Automatic Operation
When you start playback from a source component, the input selector on this unit switches to that component automatically. (Except TAPE 2)

Synchronized Recording
Lets you synchronize recording with the start of playback when recording from CD or LD.

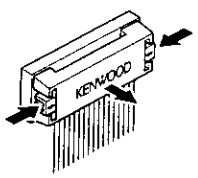
Connection of flat-cable connector

Inserting the connector



Push in the connector straight into the socket until it clicks to indicate the locking.

Removing the connector



Push and hold the two ends of the connector, and pull it straight outward.

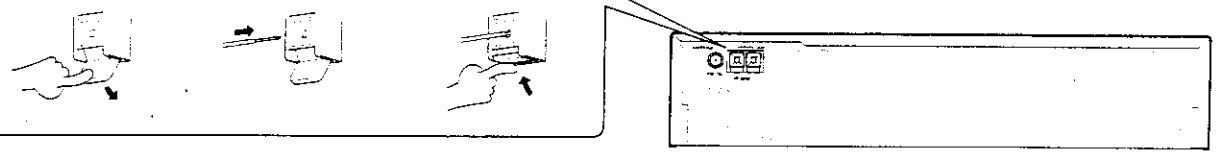
Notes

1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging / unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.
4. If the system control cords or audio cords are not connected properly, the remote control or automatic operation between system components will not work properly.

Connection of antenna

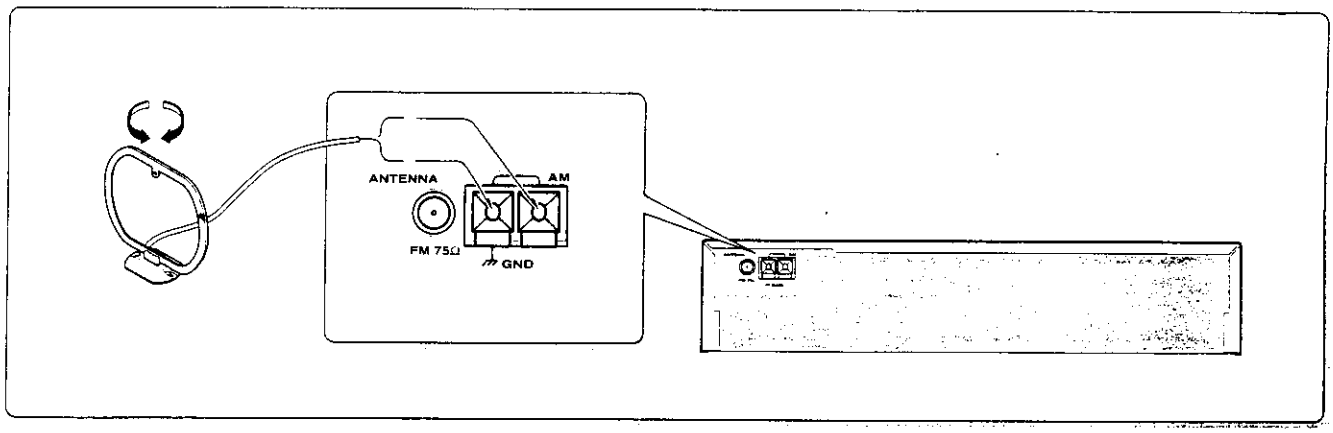
Connection method to each antenna terminal

❶ Push lever. ❷ Insert cord. ❸ Return lever.



AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.

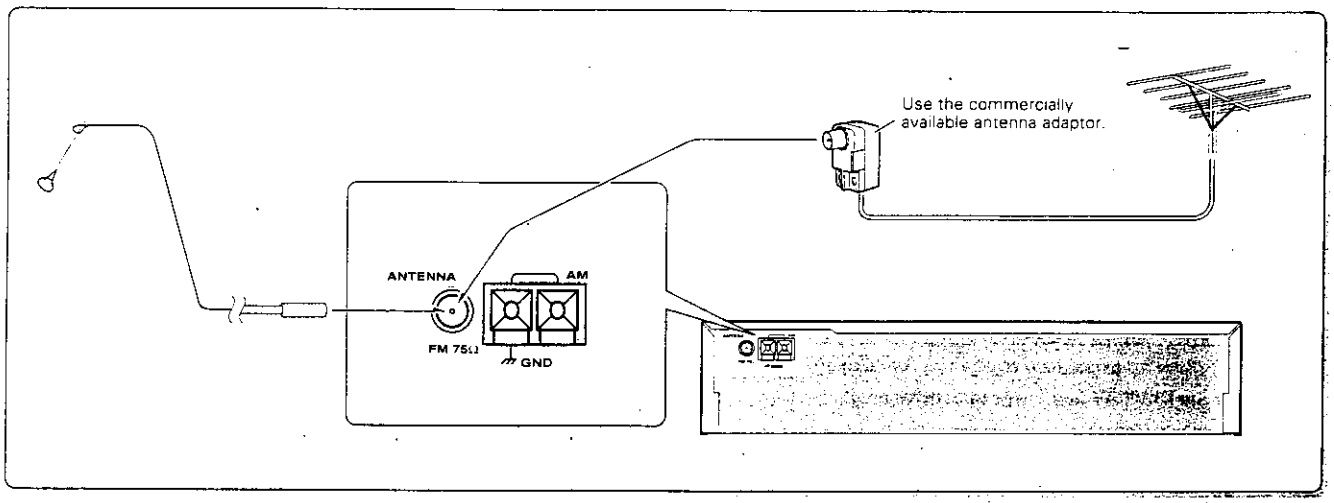


FM indoor antenna connection

The accessory antenna is for temporary indoor use only. For stable signal reception we recommend using an outdoor antenna. Remove the indoor antenna if you connect one outdoors.

FM outdoor antenna connection

Lead the 75 Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75 Ω terminal.



Changing the input selection display (AUTO key)

***1: To change the TAPE 1 display to MD display**

❶ Select "TAPE 1" with the INPUT selector .
❷ Press and hold the AUTO key for more than 2 seconds, until "MD" is displayed.

Each press switches the indication.

① TAPE1 → ② MD

To make the system control operation, the input selection display should be switched according to the actually connected components.
About the system control connections → 8

Switching the display mode (DISPLAY key)

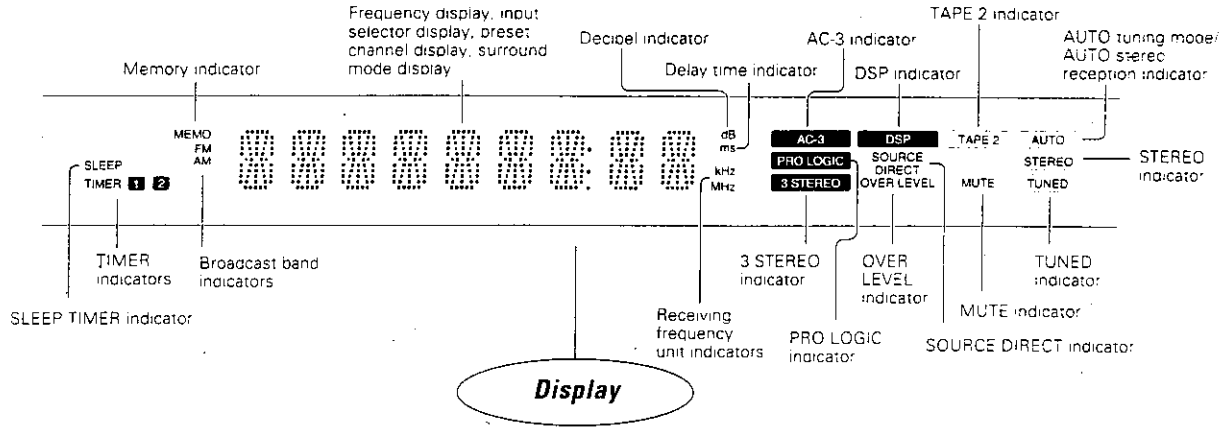
Use the following procedure to change the display mode.

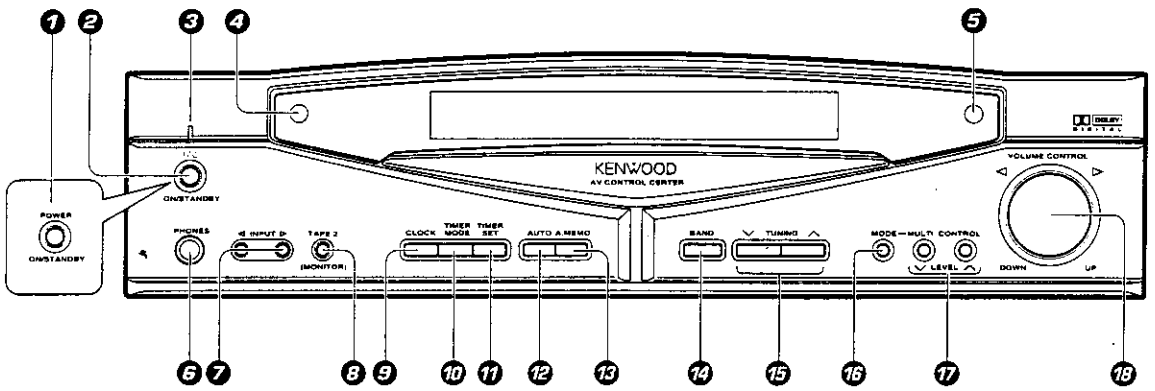
❶ Press the DISPLAY key (remote control only).

Each press switches the indication.

① INPUT selector display → ② DOLBY/DSP/STEREO display → ③ Time display

- The time display is displayed for only 5 seconds, after which the INPUT selector display appears automatically.
- The display of ② is not shown during SOURCE DIRECT operation.





The keys which have the same names as the controls on the remote control unit provide the same functions as them.

❶ POWER (ON/STANDBY) key (U.S.A. and Canada)
Press to switch between ON and STANDBY.

❷ I/⏻ (ON/STANDBY) key
Press to switch between ON and STANDBY.

❸ STANDBY indicator

❹ Remote sensor

❺ GRC transmitter
Outputs the signals transmitted to the Graphical Remote Control.

❻ PHONES jack
For use in headphones listening.

❼ INPUT selector key
Press to select the input.

❽ TAPE 2 (MONITOR) key
For use in monitoring of recording, etc.

❾ CLOCK key
Press to set the clock.

❿ TIMER MODE key
Press to switch the timer modes.

⓫ TIMER SET key
Press to set the timer function.

⓬ AUTO key
Press to select the tuning mode.
The auto tuning or manual tuning mode can be selected.
The input selection display of a source can be switched to another by pressing and holding the **AUTO** key for more than 2 seconds. → 10

⓭ A.MEMO key
Press when using the auto memory function.

⓮ BAND key
Press to switch the broadcasting band.

⓯ TUNING keys (∨, ∧)
Press to select the radio station to be received.
These keys are also used in the clock adjustment and timer operations.

⓰ MODE key
Press to switch various setting modes.

⓱ MULTI. CONTROL keys
Press to select various setting modes.

⓲ VOLUME CONTROL knob

STANDBY mode indication

While standby mode is indicated, a small amount of power is supplied to the system to back up the memory. In this mode, the system can be turned ON by remote control.

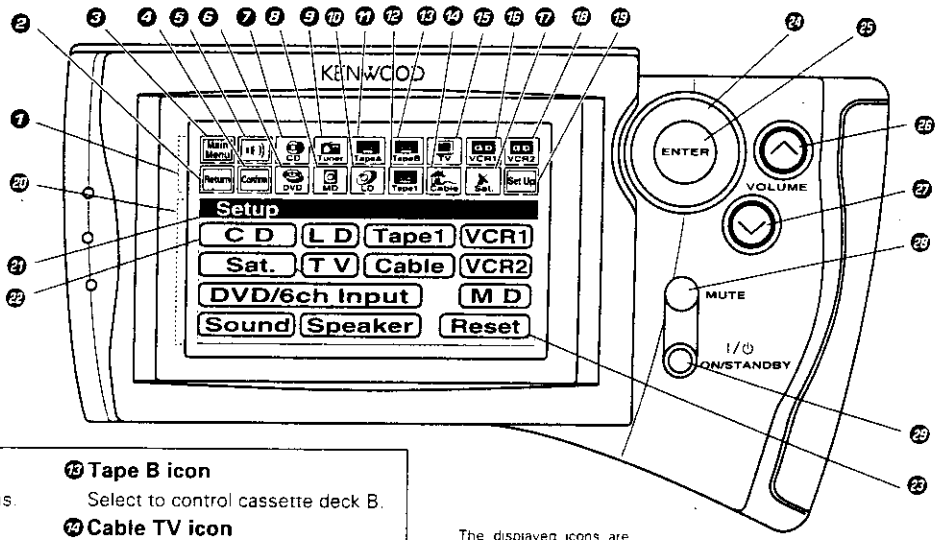
12 Controls and indicators

The Graphical Remote Control (GRC) unit provided with the AV CONTROL CENTER can also control KENWOOD cassette decks, CD player, DVD player and LD player which are connected to it through system control cords. For details of the controllable functions, refer to the instruction manuals of these components.

Model: GRC-101
Infrared system

Note

Perform "Model Type Setup" of the GRC before using it.



The displayed icons are variable depending on the "Model Type Setup" for matching specifications with the AV Control Center which uses the GRC unit and "Set Up" for matching specifications with connected source component.

Segment screen

❶ Segment screen
This area displays the fixed icons.

❷ Return icon
Select to return to the previous display.

❸ Main Menu icon
Select to change the input source or select Main Menu 2.

❹ Confirm icon
Select to confirm a setting, etc.

❺ Sound icon
Select to control the sound-related functions.

❻ DVD icon
Select to control the DVD player.

❼ CD icon
Select to control the CD player.

❽ MD icon
Select to control the MD recorder.

❾ Tuner icon
Select to control the tuner.

❿ LD icon
Select to control the LD player.

⓫ Tape A icon
Select to control cassette deck A.

⓬ Tape 1 icon
Select to control cassette deck 1.

⓭ Tape B icon
Select to control cassette deck B.

⓮ Cable TV icon
Select to control the cable TV.

⓯ TV icon
Select to control the TV.

⓰ VCR 1 icon
Select to control VCR 1.

⓱ Satellite Tuner icon
Select to control the satellite tuner.

⓲ VCR 2 icon
Select to control VCR 2.

⓳ Set Up icon
Select to make setup operations.

- The input source can be selected using icon ❸.
- Icons ❻ to ⓲ are used to select the component to be controlled.

Menu screen

⓴ Menu screen
This area displays the control key icons and level information.

㉑ Mode display
The above illustration indicates the Setup mode.

㉒ CD icon
Select to set up the CD player.

㉓ Reset icon
Select to return to the "Model Type Setup" menu screen.

Operation keys

㉔ Joystick key
For use in selecting icons.
The joystick moves in 8 directions.

㉕ ENTER key
Press to enter a selection.

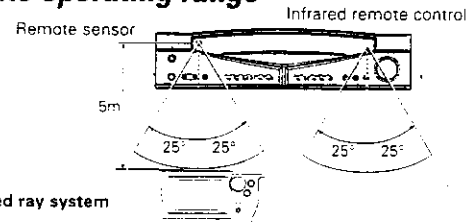
㉖ VOLUME (UP) control key
Press to increase the volume level.

㉗ VOLUME (DOWN) control key
Press to decrease the volume level.

㉘ MUTE key
Press to mute sound temporarily.

㉙ I/⏻ (ON/STANDBY) key
Press to switch the AV CONTROL CENTER and the components connected to it through system control cords between ON and STANDBY.

Approximate operating range

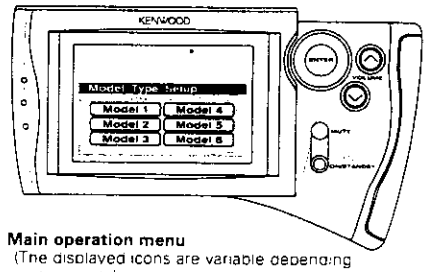


Notes

1. The supplied batteries are intended for use in operation check. Therefore, their lives may be shorter than ordinary batteries.
2. When the remote-controllable distance gets shorter than before, replace all four batteries with new ones.
3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote sensor. In such a case, change the system installation position to prevent the malfunction.
4. The GRC display may show erroneous information when the GRC unit is operated from outside the specified range.

Setting up the GRC according to your AV CONTROL CENTER (Model Type Setup)

Perform the following procedure after inserting batteries for the first time and every time after changing them.



Main operation menu
(The displayed icons are variable depending on the model.)

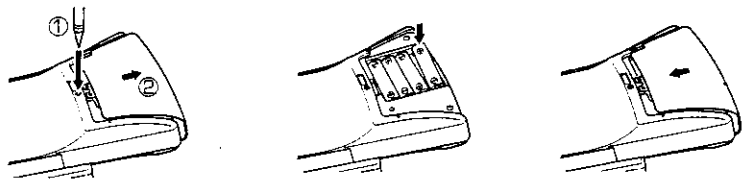
Preparation

- Press the POWER or I/⏻ (ON/STANDBY) key of the main unit to the ON mode.

Model Type Setup (GRC setup procedure)

1 Loading batteries

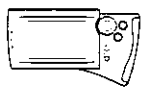
❶ Remove the cover. ❷ Insert batteries. ❸ Close the cover.



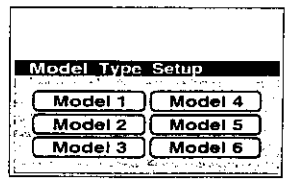
Caution in battery replacement

- Insert four AAA-size (R03/UM-4) batteries as indicated by the polarity marking.
- To maintain the memory of the settings you made before, complete the battery replacement operation within 30 seconds.
- The procedure on the left should also be performed when resetting the GRC (as a measure against its malfunction). However, in this case, wait for about five minutes after removing the batteries and before re-inserting them.

2 Check the display.



The "Model Type Setup" screen appears.

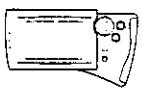


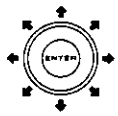
3 Move the cursor to the Model type icon matching the AV CONTROL CENTER.

❶ Identify the model type.
(use the table on the right).

❷ Move the cursor.

It can be moved in 8 directions depending on how you press the joystick key.



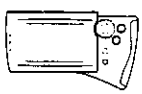


The icon on which the cursor is moved blinks in reverse video.

AV CONTROL CENTER Model	GRC "Model Type Setup" icon
C-V100	Model 1
C-V150	Model 1
C-V300	Model 2
C-V350	Model 2
C-V500	Model 3
C-V550	Model 4
C-V700	Model 4
C-V750	Model 4
C-V770	Model 3

4 Enter the selection.

Press the ENTER key.



ENTER

To change Model Type Setup

❶ Select Set Up. Set Up

❷ Press the ENTER key. ENTER

❸ Select Reset. Reset

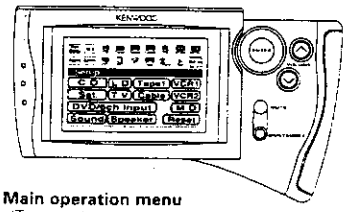
❹ Press the ENTER key. ENTER

❺ Perform the setup procedure from step "4 Check the display".

- The above operation clears all of the previously made settings and resets the unit to the initial condition.

14 Setting up the GRC according to the option components (Set Up)

The following procedures prepare the GRC for operating the components connected through system control cords. Make sure that these components are connected through system control cords. – 8



Main operation menu
(The displayed icons are variable depending on the model.)

- If you proceed to the following "Set Up" operations immediately after steps 1 to 4 of "Model Type Setup (GRC setup procedure)" on page – 13, start operation with step "❺ Select the CD icon" in the "Set Up CD" procedure.

Set Up CD

Setup of GRC according to the CD player in use

❶ Select the "Set Up" icon.

Set Up

❷ Press the "ENTER" key to enter the selection.

ENTER

❸ Select the "CD" icon.

C D

❹ Press the "ENTER" key to enter the selection.

ENTER

❺ Select the "Single" icon.

Single

- Select "Single", "Dual", "Carrousel" or "Changer" according to the connected CD player type.

❻ Press the "ENTER" key to enter the selection.

ENTER

❼ Select the "Main Menu" icon.

Main Menu

❽ Press the "ENTER" key to enter the selection.

ENTER

- Icon CD appears at the moment the setup has completed.

Set Up Tape 1

Setup of GRC according to the cassette deck in use

❶ Select the "Set Up" icon.

Set Up

❷ Press the "ENTER" key to enter the selection.

ENTER

❸ Select the "Tape 1" icon.

Tape1

❹ Press the "ENTER" key to enter the selection.

ENTER

❺ Select the "Dual" icon.

Dual

- Select "Dual" or "Single" according to the connected cassette deck type.

❻ Press the "ENTER" key to enter the selection.

ENTER

❼ Select the "Main Menu" icon.

Main Menu

❽ Press the "ENTER" key to enter the selection.

ENTER

- Icons Tape A / Tape B or icon Tape1 appear at the moment the setup has completed.

Set Up LD

Setup of GRC according to the LD player in use

❶ Select the "Set Up" icon.

Set Up

❷ Press the "ENTER" key to enter the selection.

ENTER

❸ Select the "LD" icon.

L D

❹ Press the "ENTER" key to enter the selection.

ENTER

❺ Select the "System Control" icon.

System Control

- Select "System Control" or "IR" according to the connected LD player type.

❻ Press the "ENTER" key to enter the selection.

ENTER

- Icon LD appears at the moment the setup has completed.

In the operations of the GRC (Graphical Remote Control unit), proceed to each step within 10 seconds after the previous step.
The display disappears in 10 seconds.

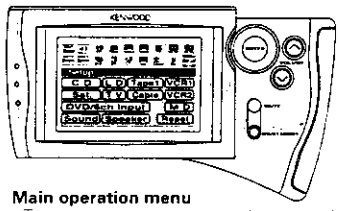
To resume GRC display, move the Joystick key in any directions

Set Up MD and DVD

For the "Set Up" for connecting a MD recorder or a DVD player, refer to the instruction manual of each piece of equipment.

Setting up the GRC according to other components (Set Up)

The GRC can also be used to remote control other components which are not connected through system control cords. To control another component, it is required to register the setup code corresponding to it beforehand. – 47



Main operation menu
(The displayed icons are variable depending on the model.)

Registering setup codes for VCR 1

1 Find the setup code of the component to be registered by referring to the Setup code chart in this manual.

2 Enter the setup code.

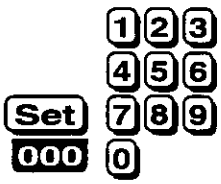
❶ Select the "Set Up" icon.

❷ Enter the selection (by pressing the "ENTER" key).

❸ Select the "VCR 1" icon.

❹ Enter the selection (by pressing the "ENTER" key).

❺ Enter the setup code.



❻ Select the "Set" icon.

❼ Enter the selection (by pressing the "ENTER" key).

Check the operation of the component.

❶ **Display the operation screen of the component to be checked.**
❷ **Turn on the component from the GRC and confirm the actual component.**

- If there is more than one setup code, input each code to see which one turns the power on. That will be the correct code for your component.

Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.)
With some models, be sure to keep the ENTER key pressed for a while.

Use the numeric keys as shown below.

Entry examples:

431 ..... 4 ENTER 3 ENTER 1 ENTER
400 ..... 4 ENTER 0 ENTER 0 ENTER

- When a code which is not shown in the setup code chart is entered, the entered code disappears automatically.

3 Press Check (GRC), and check to see that the component you want to control turns on.

- If the component does not react, and there is more than one setup code, enter another setup code and try again.
- If the component is already on, pressing **Check** will turn it off.

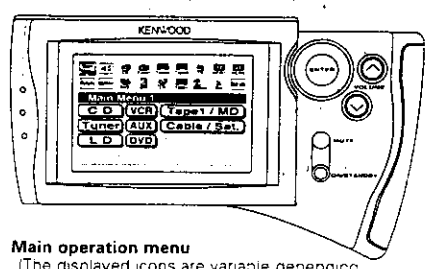
Registering setup codes of other components

The procedure of steps 1 and 2-❶ to ❼ of "Registering setup code for VCR 1" also allows to register the components listed below to remote control them from the GRC.

Registering setup code for VCR 2
Registering setup code for TV
Registering setup code for CABLE
Registering setup code for SATELLITE
Registering setup code for LD player (IR).

Controlling the AV CONTROL CENTER

The operations required to remote control the AV CONTROL CENTER includes the INPUT selector selection, display mode selection, stereo selection and so on.
The following procedures show how to remote control the basic operations of the GRC.

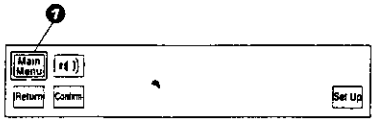


Main operation menu
(The displayed icons are variable depending on the model.)

Operation examples

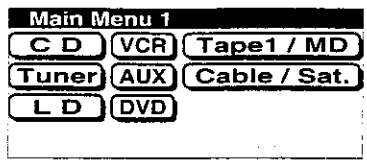
Switching the INPUT selector (Selecting the CD input)

❶ Select the "Main Menu" icon in the fixed segment screen by operating the joystick.



❷ Press the "ENTER" key to enter the selection.

❸ Select the "CD" icon with the joystick.



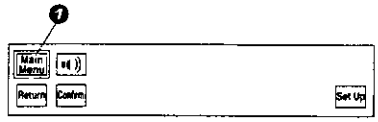
❹ Press the "ENTER" key to enter the selection.

❺ The input source is switched to "CD".

- Other input than CD can be selected in step ❸.

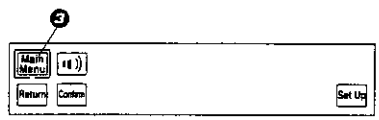
Switching the display mode of the AV CONTROL CENTER

❶ Select the "Main Menu" icon in the fixed segment screen by operating the joystick.



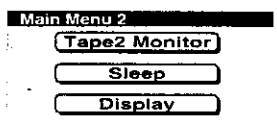
❷ Press the "ENTER" key to enter the selection.

❸ Select the "Main Menu" icon again.



❹ Press the "ENTER" key to enter the selection.

❺ Select the "Display" icon.



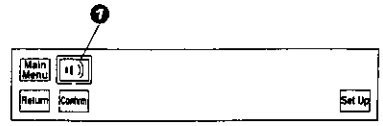
❻ Press the "ENTER" key to enter the selection.

❼ Each press of the "ENTER" key switches the display mode.

- It is also possible to select the Tape 2 Monitor or Sleep icon in step ❺.

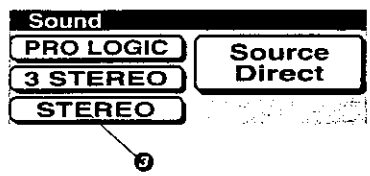
Selecting the stereo mode

❶ Select the "Sound" icon in the fixed segment screen by operating the joystick.



❷ Press the "ENTER" key to enter the selection.

❸ Select the "STEREO" icon with the joystick.



❹ Press the "ENTER" key to enter the selection.

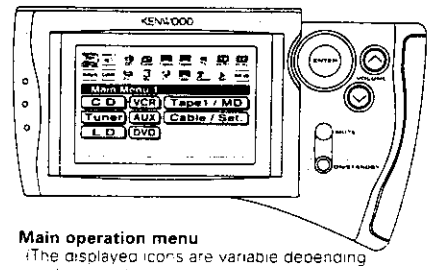
- It is also possible to select the PRO LOGIC, 3 STEREO or Source Direct icon in step ❸.

Controlling the components connected through system control cords

When a CD player, cassette deck and/or LD player are connected with the AV CONTROL CENTER through system control cords, their system control operations are possible from the GRC.

Preparations

- System control connection – 8
- Model Type Setup – 13
- Setup of source components – 14



Main operation menu
(The displayed icons are variable depending on the model.)

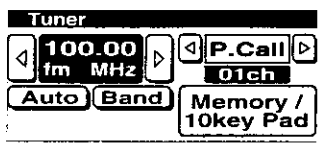
Operating the tuner

❶ Select the "Tuner" input.

- After selecting the icon, press the **"ENTER"** key to enter the selection.

❷ Display the tuner operation menu.

❸ Select the icon to be operated.



- Any of the keys which can control the tuner can be selected.

❹ Enter the selection
(by pressing the **"ENTER"** key).

Operating the CD player

❶ Select the "CD" input.

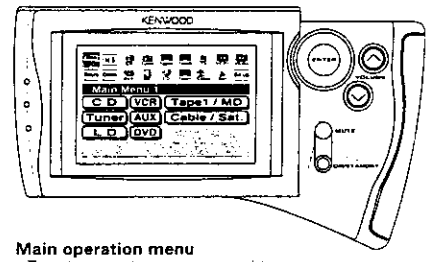
❷ Display the CD operation menu.

❸ Select the icon to be operated.

- Any of the CD player operation keys can be selected.
- The menu display shown on the left is an example which appears with a single CD player.

❹ Enter the selection
(by pressing the **"ENTER"** key).

- For the operation of the CD player, also read the instruction manual of the CD player.



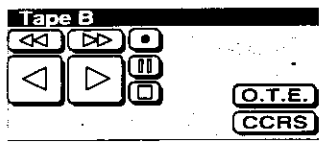
Main operation menu
(The displayed icons are variable depending on the model.)

Operating the cassette deck

❶ **Select the "Tape 1" input.**

❷ **Display the cassette deck operation menu.**

❸ **Select the icon to be operated.**



❹ **Enter the selection**
(by pressing the **"ENTER"** key).

- The procedure on the left is an example assuming that "Dual" has been selected in the "Setup" operation.
- In case "Single" was selected in the Setup operation, the "Tape 1" icon is displayed.

- Any of the cassette deck operation keys can be selected.

- For the operation of the cassette deck, also read the instruction manual of the cassette deck.

Operating the LD player

❶ **Select the "LD" input.**

❷ **Display the LD player operation menu.**

❸ **Select the icon to be operated.**

❹ **Enter the selection**
(by pressing the **"ENTER"** key).

- Any of the LD player operation keys can be selected.
- The procedure on the left is an example assuming that "System Control" has been selected in the "Setup" operation.

- For the operation of the LD player, also read the instruction manual of the LD player.

One-touch operation and easy operation features

(CD player, cassette deck, MD recorder, DVD player and LD player)

When the system is in standby mode, the operations as described below are possible provided that the associated components are connected through system control cords.

- Use the main unit keys for operation.

Preparations

❶ Ensure that system control cords are connected.
❷ Set the power switch of the cassette deck, DVD player and LD player to the ON position.
❸ Set the power switch of the power amplifier to the ON position.
❹ Load the source component with the software to be played.
❺ Press the POWER or I / ⏻ key of the AV CONTROL CENTER to put it to standby mode.

- The STANDBY indicator lights.

Function available with the play key operation

❶ Press the play key.
❷ The system is switched from standby mode to ON mode.
❸ The input selector is switched automatically.
❹ Playback starts.

- CD player, DVD player and cassette deck

Function available with the eject key operation

❶ Press the eject key.
❷ The system is switched from standby mode to ON mode.
❸ The tray panel of the source component opens.

- CD player, DVD player and cassette deck
- This operation is not available from the eject key of a double cassette deck.

Operation available by switching the input selector

❶ Select the desired input with the input selector.
❷ The selected source component starts to play.

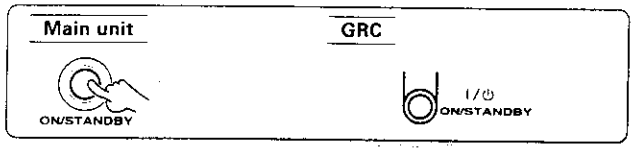
- Turn on the system before switching the input selector.
- This operation is available when the CD, TAPE 1/MD, DVD or LD input is selected.

The following procedure allows to play a CD or cassette tape.

Preparations

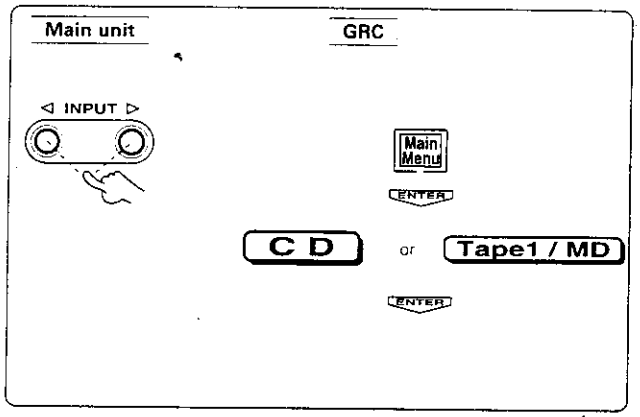
- Connect components as described in "System connection". →5
- Complete "Setup of the Graphical Remote Control (GRC) unit". →12

1 Press the ON/STANDBY key to ON.



- Load the CD player or cassette deck with the software to be played.
  ➡Read the instruction manuals of the associated components.

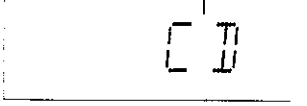
2 Select the input source.



With the main unit operation, the input sources are switched as shown below.

1. **VCR**
2. **AUX**
3. **TAPE 1 / MD *1**
4. **TUNER (frequency display)**
5. **CD**
6. **DVD-D**
7. **DVD-A**
8. **LD -D**
9. **LD -A**
10. **CABLE / SAT**

The selected source is displayed.

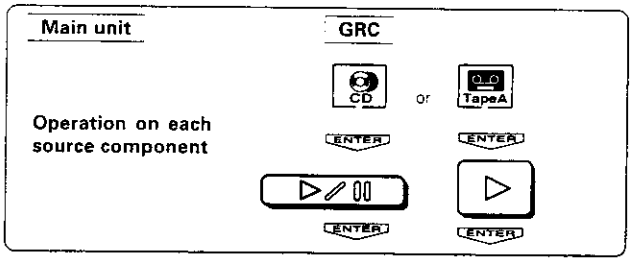


***1: To change the TAPE 1 display to MD display**

To enable system-control operation, the displayed information should be set according to the actually connected components. →10

- Step 3 can be omitted if the easy operation feature is available. →19

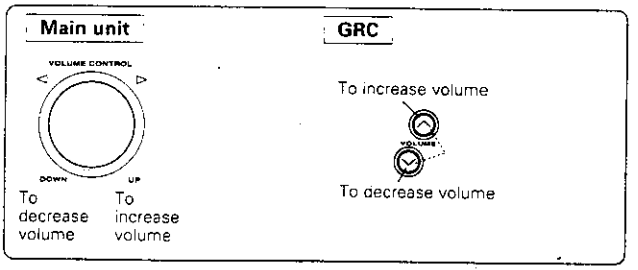
3 Play the selected source.



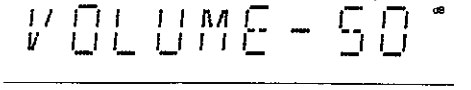
One-touch operation

Pressing the play key of the CD player or cassette deck starts up the system automatically and starts playback. When this operation is used, steps 1 and 2 can be omitted. →19

4 Adjust the volume.

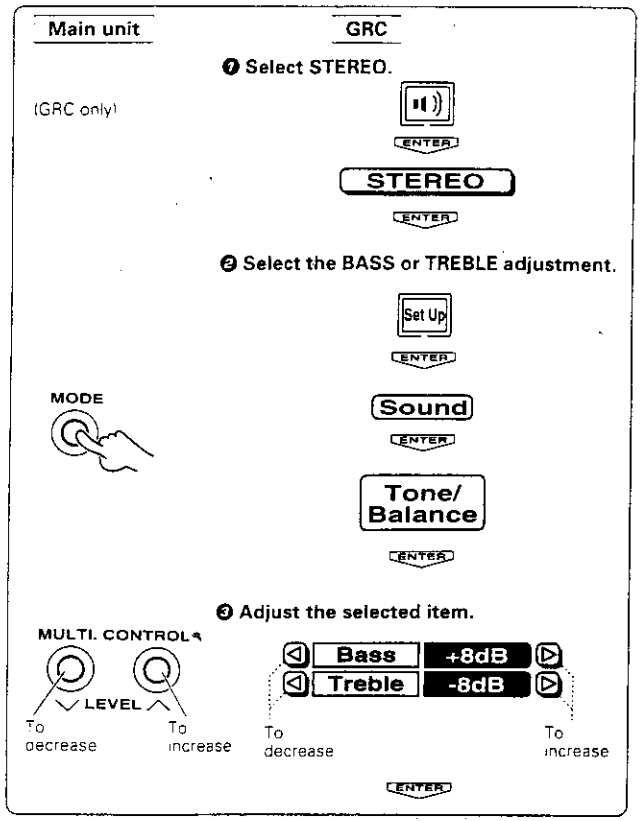


Volume level is displayed.



- The time taken till the volume level is displayed is variable depending on the current operating condition.
- Rotating the **VOLUME CONTROL** at a higher speed increases the amount of volume change (AI VOLUME function).
- The sound of input source cannot be listened to while **TAPE 2 (MONITOR)** is ON.

Adjusting the tone



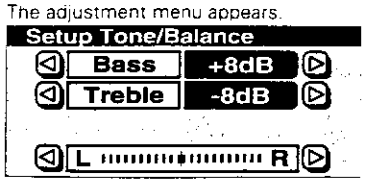
Main unit

Each press of the **MODE** key swithes the adjustment item as shown below.

1. **BASS** :Tone, Bass
2. **TREBLE** :Tone, Treble
3. **L -------- R** :Balance
4. **SW ch** :Subwoofer
5. **INPUT** :Input level

GRC

The adjustment menu appears.

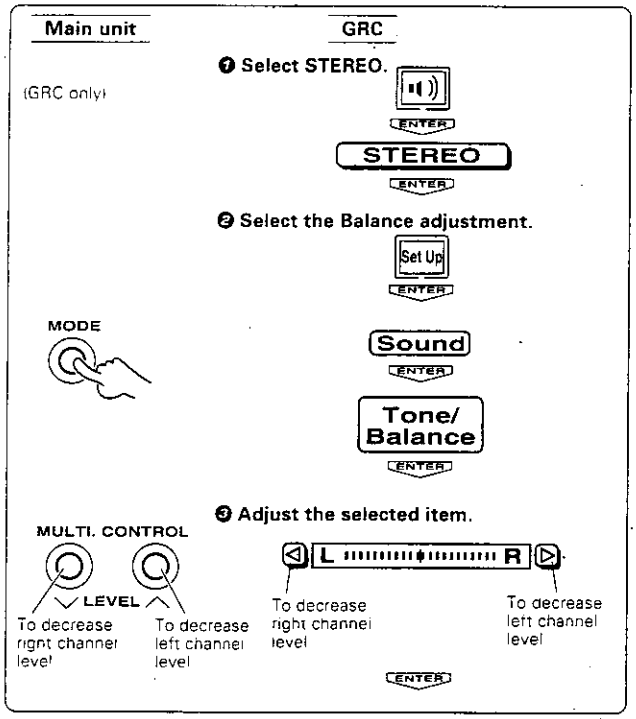


- The display on the GRC disappears if no operation has been performed for about 10 seconds.
- The display on the main unit disappears if no operation has been performed for about 5 seconds.

Display when BASS is selected — The level value changes.

- The level can be adjusted between -8 and +8 in steps of 2.
- The tone cannot be adjusted when the input selector is set to the AC-3 indicator is displayed.

Adjusting the left/right sound balance



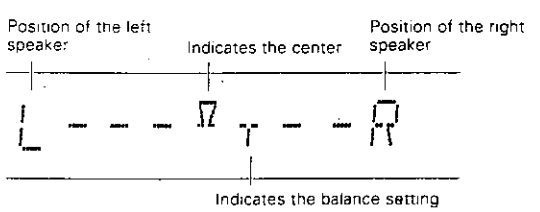
Main unit

Each press of the **MODE** key swithes the adjustment item as shown below.

1. **BASS** :Tone, Bass
2. **TREBLE** :Tone, Treble
3. **L -------- R** :Balance
4. **SW ch** :Subwoofer
5. **INPUT** :Input level

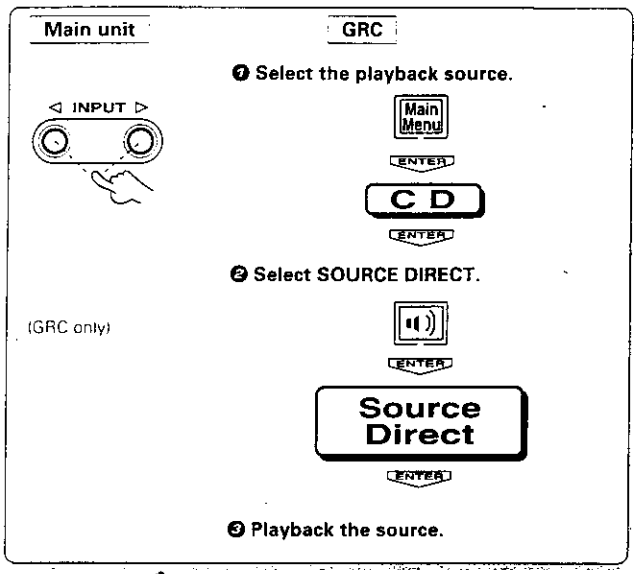
GRC

- If you proceed to this procedure immediately after that for "Adjusting the tone", you can use the same menu on the GRC.



Source Direct playback

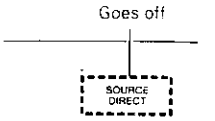
This feature allows you to play the source signal with a high quality by passing it only through the minimum required circuitry.



Lights up

- During Source Direct playback, the tone controls (BASS and TREBLE) and balance control are defeated.
- The Source Direct playback is canceled when any key associated with the surround play is pressed.
- The Source Direct playback is not possible during Dolby Digital playback.

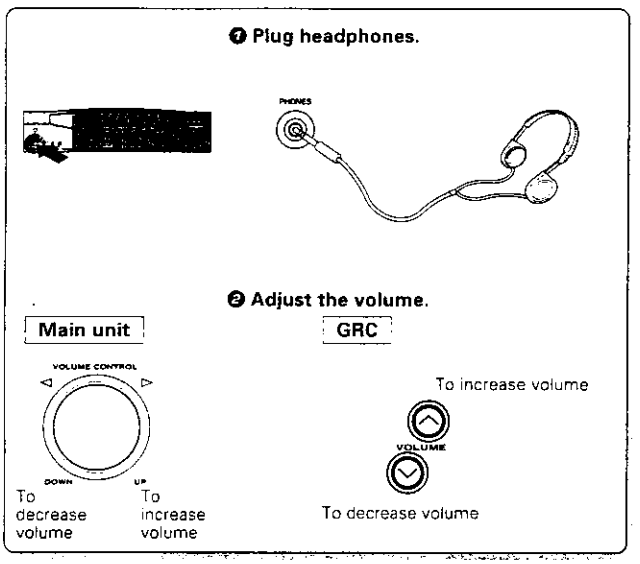
Goes off



To cancel

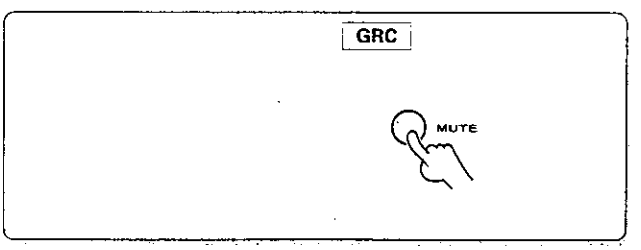
Select the Source Direct again.

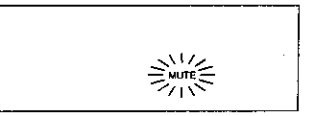
To listen through headphones



- The speaker sound is defeated at the moment headphones are inserted into the **PHONES** jack.
- If headphones are plugged in during surround play, its mode is automatically switched to the STEREO mode.
  The previous status resumes at the moment headphones are unplugged.
- If headphones are plugged in during test tone output, the test tone output stops.

To mute sound temporarily





Blinks

To cancel

Press the MUTE key again.

Recording

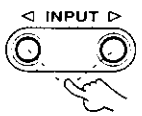
When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select TAPE1 or MD according to the connected component.

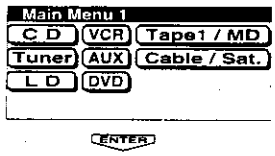
To record a music source

Main unit **GRC**

❶ Select the source to be recorded.

Select an input source other than TAPE 1.





❷ Put the cassette deck in record-pause mode.

❸ Play the source and start recording.

Main unit

Each press switches the indication.

1. **VCR**
2. **AUX**
3. **TAPE 1 / MD**
4. **TUNER (frequency display)**
5. **CD**
6. **DVD-D**
7. **DVD-A**
8. **LD -D**
9. **LD -A**
10. **CABLE / SAT**

GRC

Select the icon of the source to be played.

- The TAPE 1 display can be changed to the MD display. →10
- For the recording using a cassette deck or MD recorder, read the instruction manual of the cassette deck or MD recorder.
- Recording sound from a MD recorder onto TAPE 1 is not possible because the input selection is overlapped.
- Remember that varying the input level during recording causes the recording level to be varied.

Notes for using the LD or DVD source

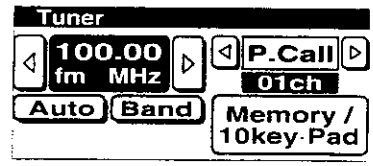
When LD or DVD is selected as the input source, the operation is subjected to the following restrictions.

Restrictions with LD and DVD:

1. Both audio and video can be recorded if the source uses analog audio.
2. Audio recording is not available if the source uses digital audio.
   However, audio recording is possible if the analog input from the source is available (when the analog output jacks of the DVD are connected to the audio input jacks of the AV CONTROL CENTER and the DVD outputs analog audio signal).
3. The TAPE 2 (MONITOR) function is not available with the digital input.

Regarding TAPE 2 (MONITOR)

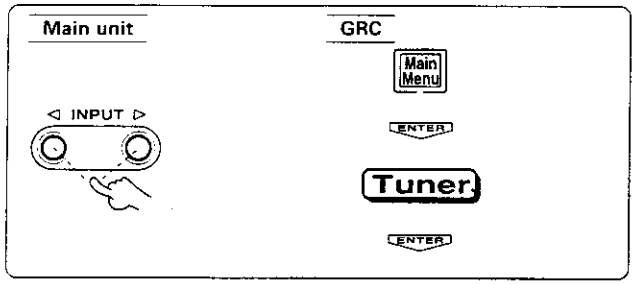
A cassette deck or graphic equalizer can be connected to this unit's **TAPE 2 (MONITOR)** terminals. If you connect a graphic equalizer, turn the **TAPE 2 (MONITOR)** key ON. If you connect a 3-head cassette deck, you can monitor the source sound, or the sound being recorded, while recording. Pressing the **TAPE 2 (MONITOR)** key lets you compare the recorded sound and the source sound. Refer to the operating manual for the component you connected for further details.



Main operation menu
(The displayed icons are variable depending on the mode.)

Receiving broadcast station

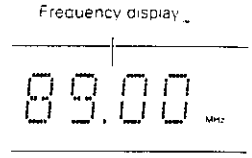
1 Select the TUNER input.



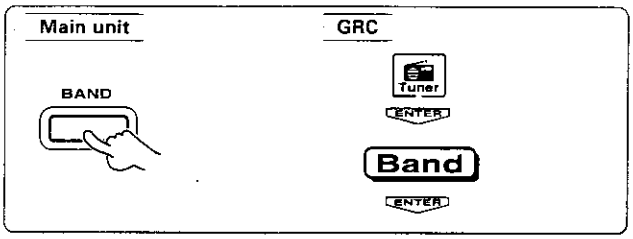
Main unit

Each press switches the indication.

1. **VCR**
2. **AUX**
3. **TAPE 1 / MD**
4. **TUNER (frequency display)**
5. **CD**
6. **DVD-D**
7. **DVD-A**
8. **LD -D**
9. **LD -A**
10. **CABLE / SAT**

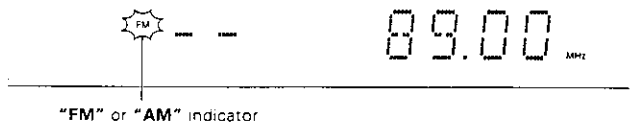


2 Select the broadcast band.



Each press switches the indication.

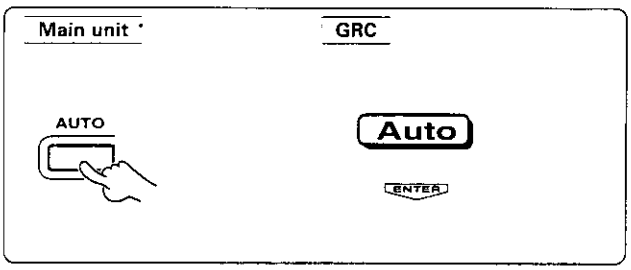
1. **FM**
2. **AM**



"FM" or **"AM"** indicator

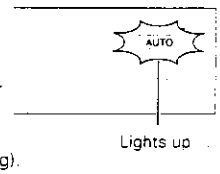
- You can also start the procedure from step **2** by omitting step **1**.

3 Select the tuning method.



Each press switches the indication.

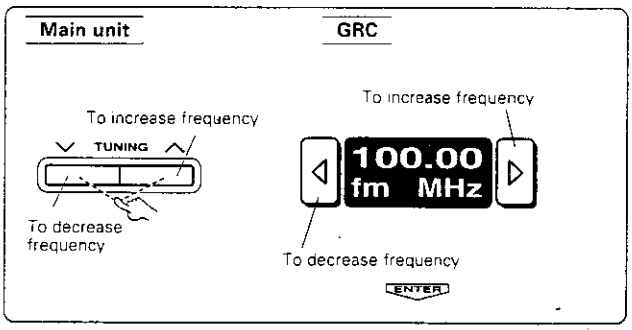
1. **AUTO** lit (auto tuning)
2. AUTO not lit (manual tuning)

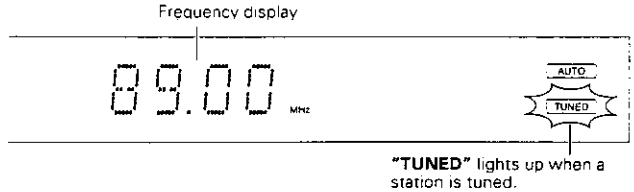


- Usually, set the switch to **AUTO** (auto tuning).

Select manual tuning when noise interferes due to weak radio wave. (The stereo broadcasting is received in monaural during manual tuning.)

4 Select a station.





"TUNED" lights up when a station is tuned.

Auto tuning : The next station found is tuned automatically.
Manual tuning : Press repeatedly or hold until a station is tuned.

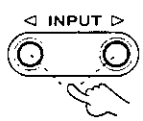
Use the operating procedure on this page to store stations automatically in preset memory. Up to 40 stations can be preset and received with a simple key operation.

Storing stations automatically in preset memory (AUTO MEMORY)

The following procedure allows to select broadcast stations and store them in the preset memory (up to 40 stations can be preset).

1 Set the INPUT selector to "TUNER".

Main unit

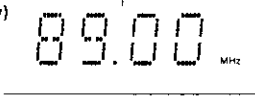


Main unit

Each press switches the indication.

1. VCR
2. AUX
3. TAPE 1 / MD
4. TUNER (frequency display)
5. CD
6. DVD-D
7. DVD-A
8. LD -D
9. LD -A
10. CABLE / SAT

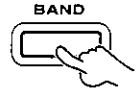
Frequency display



- The previously tuned frequency is displayed.

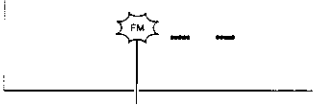
2 Set the receiving band.

Main unit



Each press switches the indication.

1. FM
2. AM



The **"FM"** or **"AM"** indicator should light.

3 Preset radio stations by AUTO MEMORY.

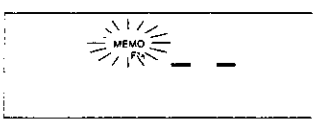
Main unit

The stations which are received are stored in order beginning from preset channels "01" (up to 40 stations can be preset).

A.MEMO

When the receiving band selected in step 2 include no more than 40 stations, stations in other bands than it will be preset after them.

Blinks



- The channels preset by the Auto Memory operation are stored by replacing the same number of previously preset channels as the newly preset channels.

Receiving a preset station

GRC

Enter the preset number (max. 40) of the desired station.

Press numeric keys in the order as described below:

To enter "15" ..... +10 ENTER 5 ENTER

To enter "20" ..... +10 ENTER +10 ENTER 0 ENTER

- If you commit a mistake in entering the digit of 10, press the +10 key several times to return to the original display and re-enter the preset number from the beginning.

Preset No.

The AUTO MEMORY function stores radio stations starting with preset channels number 1 by giving priority to the stations of the band being selected. In consequence, if you want to preset the stations in other bands than the selected band, first execute the AUTO MEMORY operation then preset other desired stations manually in preset channels left idle after the stations preset by AUTO MEMORY.

Preparation

- Select the **TUNER** input. – 17
- Display the Tuner operation menu. – 17

Order of radio station presetting

The manually preset stations can be preset either after the stations preset by the AUTO MEMORY function as shown below or by overwriting them.

Preset number

1 2 ..... 39 40

1 Station preset with AUTO MEMORY ~ **2 Station preset with Manual Memory**

Storing radio stations manually in preset memory

GRC

❶ Select the receiving band.
❷ Select a station or frequency.
❸ Press the Memory key during receiving a station.

Memory / 10key Pad

ENTER

Proceed to step ❹ within 10 sec. (If more than 10 sec. have elapsed, press the **Memory** key again.)

Memory

ENTER

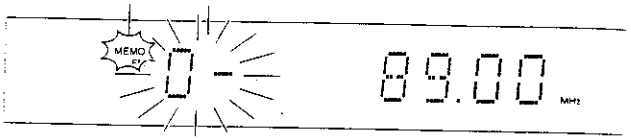
❹ Select one of the preset numbers from 1 to 40.

1 2 3
4 5 6
7 8 9
0 +10

ENTER

- Apart from the auto memory function, stations can also be stored manually in the preset memory.
- In the manual memory storage operation of radio stations, it may take a few minutes after the **Memory** key is pressed till the memory display starts to blink depending on the receiving condition.

Lights up (for 10 sec.) Blinks (for 10 sec.)



Press the numeric keys in the following order.

To store in "15" ..... +10 ENTER 5 ENTER

To store in "20" ..... +10 ENTER +10 ENTER 0 ENTER

- Repeat steps ❶,❷,❸,❹ for each of the stations to be stored in memory.
- If a station is stored in a preset number which has already stored a station memory under it, the previous memory is replaced by the new memory content.

Receiving a preset station

GRC

Memory / 10key Pad

ENTER

Enter the preset number (max. 40) of the desired station.

1 2 3
4 5 6
7 8 9
0 +10

ENTER

Press the numeric keys in the following order.

To recall "15" ..... +10 ENTER 5 ENTER

To recall "20" ..... +10 ENTER +10 ENTER 0

- If you make a mistake in entering the figure of 10, press the +10 key repeatedly until the original display is shown, then enter the correct number.

Preset number stored in memory

Receiving all preset stations in order (P. CALL)

GRC

The preset number decreases. The preset number increases.

◁ **P.Call** ▷

01ch

ENTER

- Every time the key is pressed, the next station in the order of the preset number is received.

When you press P.Call ▷ key,

1 → 2 → 3 ····· 38 → 39 → 40

When you press ◁ P.Call key,

1 → 2 → 3 ····· 38 → 39 → 40

If the key is held pressed ..... Preset stations will be received successively for about half a second each.

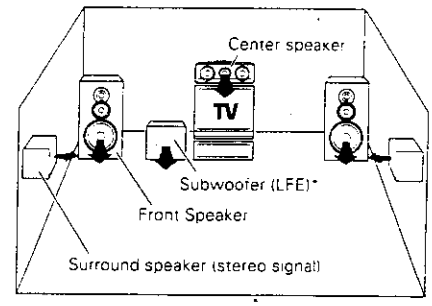
This AV CONTROL CENTER incorporates 4 different sound modes to let you enjoy surround sound with a wide variety of program sources. The Dolby Digital (AC-3) and Dolby Pro Logic surround sound let you enjoy theater-like surround effects when you play Dolby Digital (AC-3) and Dolby Surround program sources (like Laserdiscs and DVDs). Dolby 3 Stereo creates a panoramic frontal sound field. The Digital Signal Processing (DSP) modes let you create a variety of different sonic environments from almost any type of program source.
To obtain the best possible surround sound, be sure to complete "Setup for surround play" before using the surround modes.
– 30

Sound modes

Dolby Digital (AC-3)

The Dolby Digital (AC-3) surround format lets you enjoy up to 5.1 channels of digital surround sound from Dolby Digital (AC-3) program sources (such as Laserdisc software marked DOLBY DIGITAL). Compared with previous Dolby surround, Dolby Digital (AC-3) provides even better sound quality, greater spatial accuracy, and improved dynamic range.

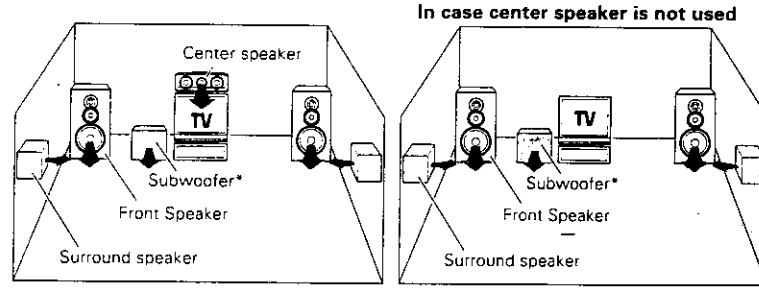
Note
Although a full set of speakers (front left, right, and center, Surround left and right, and a subwoofer) is required for true 5.1 channel Dolby Digital (AC-3) surround sound, this AV CONTROL CENTER lets you enjoy Dolby Digital (AC-3) (and Dolby Pro Logic) program sources, even if you connect only the front speakers.



* LFE = Low Frequency Effects. This channel delivers separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects.
Although only Dolby Digital (AC-3) soundtracks incorporate a separate low frequency channel, connecting a subwoofer will also improve deep bass performance in the other surround modes.

Dolby Pro Logic

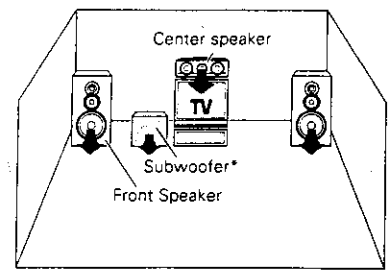
Dolby Pro Logic is a specially encoded 2 channel surround format designed to provide theater-like surround sound from Dolby Surround encoded sources (such as video and Laserdisc software marked DOLBY SURROUND). This AV CONTROL CENTER is equipped with a Dolby Pro Logic surround decoder to let you enjoy the wide variety of currently available Dolby Surround home video software.



* Optional in this mode.

Dolby 3 Stereo

Dolby 3 Stereo is available for systems that do not have surround speakers. When in the Dolby 3 Stereo mode the surround information is redirected to the front left and right speakers. This mode is designed for use with Dolby Surround program sources, but can also improve sound field unity for programs that are not Dolby Surround encoded. Dialog positioning and sound image definition, however, may not be as accurate when used with programs that are not Dolby Surround encoded.

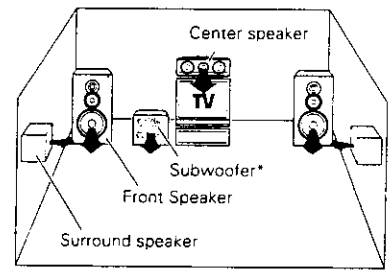


* Optional in this mode.

DSP mode

The DSP mode lets you add the atmosphere of an arena, jazz club, or stadium to almost any type of program source.* These modes are particularly effective when used with stereo program sources, like CD, television, and FM radio. You might enjoy trying the STADIUM or ARENA mode the next time you watch a concert or sporting event!
The WALL parameter lets you adjust the "brightness" of the sonic environment according to your preference.
The ROOM SIZE parameter lets you adjust the size of the sonic environment according to your preference.
The EFFECT level lets you adjust the "presence" of the sonic environment according to your preference.

* The DSP mode will produce a stereo-like surround effect from monaural sources, but there will be some reduction in the presence of the arena, jazz club, or stadium (etc.).



* Optional in this mode.

Note

With some surround modes, no sound is output to the subwoofer when all speaker channels are set to "Large".
This is because sufficient low frequency (bass) effects will be output from all of the other speakers.
If you want to use a subwoofer, be sure to set front speaker size "F" or center speaker size "C" to "Small".

Recommended speaker installation

It is recommended that the surround speakers are installed straight to the left and right of the listening position or slightly behind, at a height of about 1 meter higher than the listener's ears.

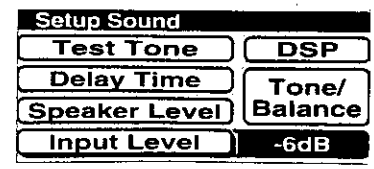
What is DSP?

The DSP stands for Digital Signal Processor. In the DSP presence mode, the reverberation components (elements of sound echoed in various spaces) which determine the feeling of presence are created by digital processing by the DSP without spoiling the sound quality of the original music source.

The feeling of presence in the surround effects can be improved by performing the following adjustment procedure according to the speaker system and listening room environment in use.
Once they are adjusted, re-adjustment is not necessary even after the surround mode is switched to other modes.

Adjustment sequence

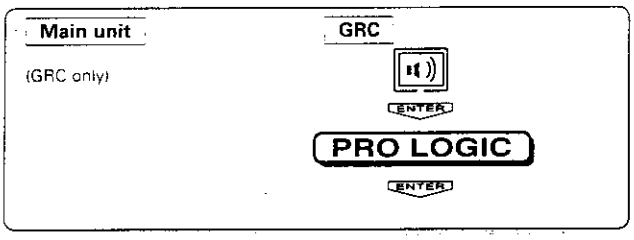
Balance adjustment ➡ Adjustment with test tone ➡ Delay time adjustment



Main operation menu
(The displayed icons are variable depending on the model.)

Setup for surround play

1 Select the Dolby mode.

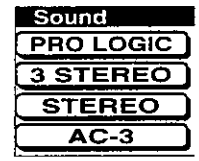


- Select the Dolby mode according to the played source and component in use. – 33
- The AC-3 mode can be used when the Dolby Digital signal is available.

Main unit

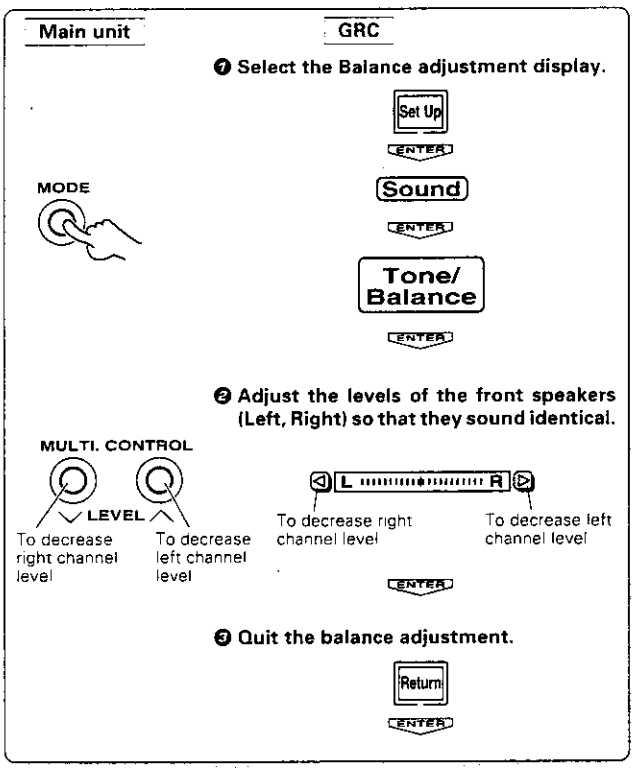
Display	Dolby mode
PRO LOGIC	:Dolby Pro Logic
3 STEREO	:Dolby 3 Stereo
AC-3	:Dolby Digital (AC-3)

GRC



Select an icon.
(The displayed icons may be variable depending on the model.)

2 Adjust the balance. "L- - - - - - -R"

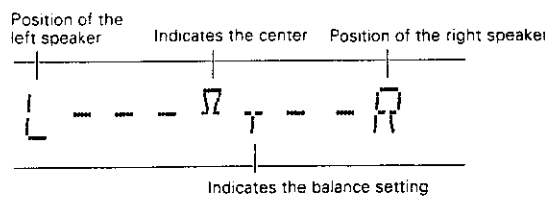


Main unit

Each press switches the adjusted items as shown below.

①	**BASS**	:Tone, Bass
②	**TREBLE**	:Tone, Treble
③	**L- - - - - - -R**	:Balance
④	**C ch**	:Center speaker
⑤	**SR ch**	:Surround speaker, Right
⑥	**SL ch**	:Surround speaker, Left
⑦	**SW ch**	:Subwoofer
⑧	**DELAY**	:Delay time
⑨	**INPUT**	:Input level

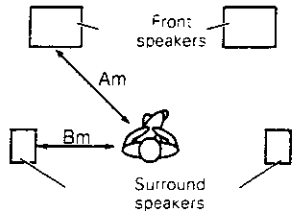
- Adjustment items ⑤, ⑥ and ⑧ are not required in the 3 STEREO mode.
- Those which can be selected when SOURCE DIRECT is ON are ⑦ and ⑨.



If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.
The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

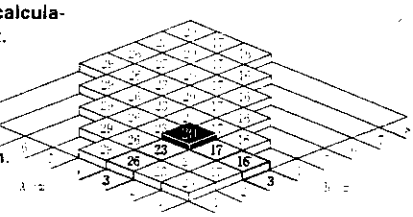
How to calculate the proper delay time

Assuming that the distance from the front speakers is A meters and that from the surround speakers is B meters:



1 **Use the delay time calculation chart on the right.**
Example:
When A = 3 m, B = 3 m, the delay time is 20 ms.

2 **Use the following formula for calculation.**
Delay time =
20 + 3 × (A - B) (Unit: ms)



What is delay time?

The sound entering the ears include the direct sound coming from the sound source and the indirect sounds reflected from the walls, floor, ceiling, etc. The indirect sounds are delayed because they travel longer distance required for reflection before they reach the ears. The delay time is the difference in time between the direct sound and indirect sounds.

3 Adjust the level from each speaker. "Test Tone"

Main unit / **GRC**

(GRC only)

❶ Output the "Test Tone".

Test Tone → ENTER → Test Tone → ENTER

❷ Adjust the levels of the other speakers than the front speakers (left, right).

(1) While test tone is output from a speaker,
(2) Adjust the volume level of the speaker.

Channel Level → SL+10dB (To decrease level / To increase level) → ENTER

❸ Quit the speaker level adjustment.

Test Tone → ENTER → Return → ENTER

- The test tone which sounds like noise move across speakers in the following sequence every 1.5 second.

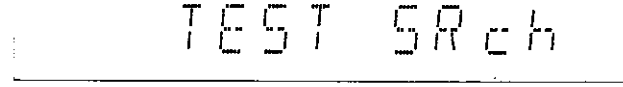
(In Pro Logic or AC-3 mode)

- **TEST Lch** (Front speaker, Left)
- **TEST Cch** (Center speaker)
- **TEST Rch** (Front speaker, Right)
- **TEST SRch** (Surround speaker, Right)
- **TEST SLch** (Surround speaker, Left)
- **TEST SWch** (Subwoofer)

(In 3 STEREO mode)

- **TEST Lch** (Front speaker, Left)
- **TEST Cch** (Center speaker)
- **TEST Rch** (Front speaker, Right)
- **TEST SWch** (Subwoofer)

- The test tones is not output from the speaker which has been set to off. Speaker setup →38



Display when test tone is output from a surround speaker

- Be sure to adjust from the listening position.
- Each press of the key increases or decrease the level by 1 dB.
- The levels of the front speaker (Left, Right) cannot be varied in step ❸.

4 Adjust the delay time. "DELAY"

Main unit / **GRC**

❶ Select the Delay Time adjustment display.

MODE

Delay Time → ENTER

❷ Adjust the Delay Time.

MULTI. CONTROL
LEVEL (To decrease / To increase)

Delay Time 20msec (To decrease / To increase) → ENTER

❸ Quit the delay time adjustment.

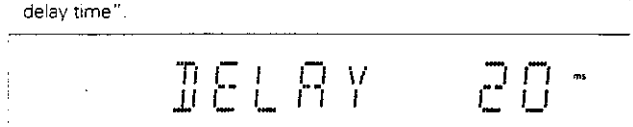
Return → ENTER

Main unit

Each press switches the adjustment items as shown below.

1. **BASS** :Tone, Bass
2. **TREBLE** :Tone, Treble
3. **L-------R** :Balance
4. **C ch** :Center speaker
5. **SR ch** :Surround speaker, Right
6. **SL ch** :Surround speaker, Left
7. **SW ch** :Subwoofer
8. **DELAY** :Delay time
9. **INPUT** :Input level

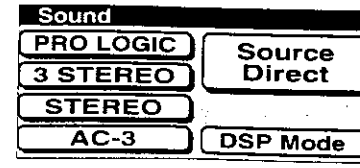
- Adjustment items 5, 6 and 8 are not required in the 3 STEREO mode.
- Find the optimum delay time for the listening room by referring to "How to calculate the delay time".
- The delay time in the PRO LOGIC mode can be adjusted between 15 and 30 ms.
- The delay time in the AC-3 mode is automatically decreased by 15 ms from that set in the PRO LOGIC mode.
- Select the closest value to the value obtained by "How to calculate the delay time".



Delay time

Dolby Digital (AC-3) can be used when playing DVD or LD software bearing the DOLBY DIGITAL mark and Dolby Digital (AC-3) format digital broadcasts (etc.). Dolby Pro Logic and Dolby 3 Stereo can be used when playing video, DVD, or LD software bearing the DOLBY SURROUND mark. DSP modes can be used with any source except Dolby Digital.
Be sure to complete "Setup for surround play" before using any of these surround modes. – 30

Sound may not be reproduced when the input signal and Dolby mode are selected improperly.
How to select the digital input, analog input and Dolby mode. – 33



Main operation menu
(The displayed icons are variable depending on the mode.)

Surround play

1 Select the desired mode.

Main unit **GRC**

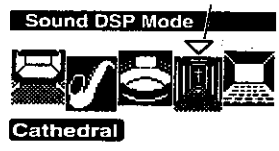
A To select a Dolby mode:

(GRC only)

B To select the DSP mode:

(GRC only)

Selection cursor



When a Dolby mode is selected:

- Select the Dolby mode according to the software to be played.

Main unit **GRC**

Display	Dolby mode
PRO LOGIC	:Dolby Pro Logic
3 STEREO	:Dolby 3 Stereo
AC-3	:Dolby Digital (AC-3)

❼ Cursor position

❽ Entry — ENTER

When the DSP mode is selected:

Main unit

- This can be selected when the mode is other than Dolby Digital.

Each selection switches the sound fields as shown below.

① **ARENA** :A lively feeling as felt in the frontmost seat in a concert arena.
② **JAZZ CLUB** :Sound field of a jazz live house where cymbals sound sharply.
③ **STADIUM** :A free feeling with little reverberation reflected from the ceiling.
④ **CATHEDRAL** :A sound field like in a cathedral.
⑤ **THEATER** :A lively sound field like in a theater.

- Sound parameter adjustments in DSP mode – 40

2 Play video software.

3 Adjust the sound level.

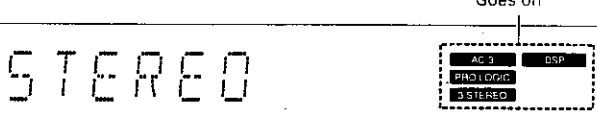
To end surround play

Main unit **GRC**

(GRC only)

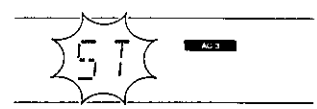
When the source is other than Dolby Digital (AC-3)

Goes off



Lights for 5 sec.

During playback of Dolby Digital (AC-3) compatible software



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Surround play of LD or DVD

When digital reproduction of the DVD or LD audio is required, set INPUT to DVD-D or LD-D.

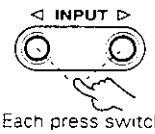
A digital auto switching function is provided to switch the Dolby mode automatically according to the DIGITAL IN signal, depending on whether it is Dolby Digital (AC-3) or PCM signal.

The digital auto switching function is activated when the unit is switched from standby mode to ON mode or when INPUT is set to DVD-D or LD-D.
However, if the AC-3, PRO LOGIC or 3 STEREO play is selected manually while the digital auto switching function is activated, this function is canceled.

To activate the digital auto switching function again, press INPUT to select DVD-D or LD-D again.

INPUT selector operation

Main unit



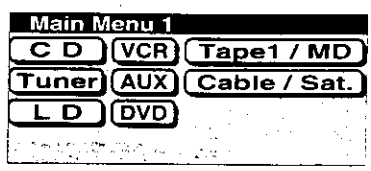
Each press switches the indication.

1. VCR
2. AUX
3. TAPE 1 / MD
4. TUNER (frequency display)
5. CD
6. DVD-D
7. DVD-A
8. LD -D
9. LD -A
10. CABLE / SAT

DVD-D : DVD Digital
DVD-A : DVD Analogue
LD -D : LD Digital
LD -A : LD Analogue

GRC

❶ **Select the input source icon.**



❷ **Press the ENTER key.**

ENTER

- With GRC, the Digital and Analog can be switched every time the **ENTER** key is pressed after selecting "DVD" or "LD".

Dolby mode selection

Surround play of digital input

INPUT selector	DVD-D		LD -D	
AC-3 AUDIO INPUT (Rear panel)	DIGITAL INPUT		DIGITAL INPUT	
Input signal	Dolby Digital (AC-3)	PCM	Dolby Digital (AC-3)	PCM
Dolby mode (display) *1	AC-3 (Dolby Digital)	1 PRO LOGIC 2 3 STEREOE (DSP)	AC-3 (Dolby Digital)	1 PRO LOGIC 2 3 STEREOE (DSP)

Surround play of analog input

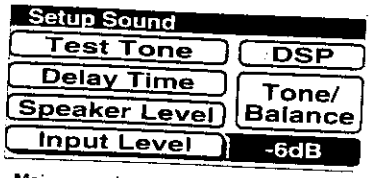
INPUT selector	DVD-A	LD -A
CONNECTION (Rear panel)	DVD (FRONT L/R)	LD (L/R)
Input signal	Analogue	Analogue
Dolby mode (display) *1	1 PRO LOGIC 2 3 STEREOE (DSP)	

- *1. The possible selections may be limited depending on the played source and speaker setting.

The setup for surround play can also be performed by listening to actual music instead of the test tone. Use the following procedure to adjust surround play while listening to music.

Preparations

- Select the Dolby mode according to the played source and component in use. →33
- Play video software marked DOLBY DIGITAL or DOLBY SURROUND.



Main operation menu
(The displayed icons are variable depending on the mode.)

Setup for surround play *(while listening to music)*

1 Select the Dolby mode.

Main unit

(GRC only)

GRC

ENTER

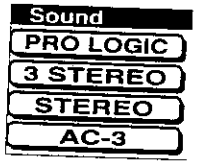
PRO LOGIC

ENTER

Main unit

Display	Dolby mode
PRO LOGIC	:Dolby Pro Logic
3 STEREO	:Dolby 3 Stereo
AC-3	:Dolby Digital (AC-3)

GRC



Select an icon.
(The displayed icons may be variable depending on the model.)

2 Adjust the adjustment item.

Main unit

MODE

GRC

Set Up

ENTER

Sound

ENTER

Speaker Level

ENTER

If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.

The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

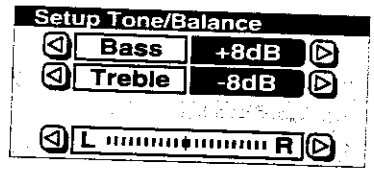
Main unit

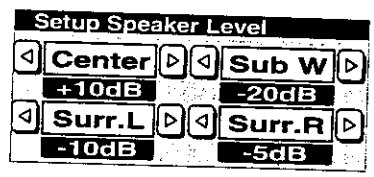
Each press switches the adjustment items as shown below.

3	BASS	:Tone, Bass
4	TREBLE	:Tone, Treble
5	L- - - - - - -R	:Balance
6	C ch	:Center speaker
7	SR ch	:Surround speaker, Right
8	SL ch	:Surround speaker, Left
9	SW ch	:Subwoofer
10	DELAY	:Delay time
11	INPUT	:Input level

- Adjustment items 7, 8 and 10 are not required in the 3 STEREO mode.

GRC





Note

- With the GRC, the adjustment items shown in a single menu can be adjusted at once. (The adjustment steps 3, 4 and 5 or steps 6, 7, 8 and 9 are provided in a single menu so they can be adjusted successively without changing the menu screen.)

3 Adjust the Bass tone level. "BASS"

Main unit | GRC

❶ Confirm the display.
(Select icon as required.)

Tone/ Balance
ENTER

MULTI. CONTROL
LEVEL
To decrease / To increase

❷ Adjust the level as required.

Bass +8dB
To decrease / To increase
ENTER

❸ Go to adjustment step "4".

MODE

Select the step "4" icon.

BASS -2 dB

4 Adjust the Treble tone level. "TREBLE"

Main unit | GRC

❶ Confirm the display.
(Select icon as required.)

MULTI. CONTROL
LEVEL
To decrease / To increase

❷ Adjust the level as required.

Treble -8dB
To decrease / To increase
ENTER

❸ Go to adjustment step "5".

MODE

Select the step "5" icon.

TREBLE +2 dB

5 Adjust the balance. "L- - - - - -R"

Main unit | GRC

❶ Confirm the display.
(Select icon as required.)

❷ Adjust the levels of the front speakers (Left, Right) so that they sound identical.

MULTI. CONTROL
LEVEL
To decrease right channel level / To decrease left channel level

L R
To decrease right channel level / To decrease left channel level
ENTER

❸ Go to adjustment step "6".

MODE

Return
ENTER

Position of the left speaker / Indicates the center / Position of the right speaker

L - - - 0 - - - R

Indicates the balance setting

6 Adjust the center speaker level. "Cch"

Main unit | GRC

❶ Confirm the display.

(Select icon as required.)

Speaker Level

ENTER

❷ Adjust the level as required.

MULTI. CONTROL

LEVEL

To decrease | To increase

Center

+10dB

To decrease | To increase

ENTER

❸ Go to adjustment step "7".

MODE

Select the step "7" icon.

Cch +2 dB

7 Adjust the right surround speaker level. "SRch"

Main unit | GRC

❶ Confirm the display.

(Select icon as required.)

❷ Adjust the level as required.

MULTI. CONTROL

LEVEL

To decrease | To increase

Surr.R

-5dB

To decrease | To increase

ENTER

❸ Go to adjustment step "8".

MODE

Select the step "8" icon.

SRch +1 dB

8 Adjust the left surround speaker level. "SLch"

Main unit | GRC

❶ Confirm the display.

(Select icon as required.)

❷ Adjust the level as required.

MULTI. CONTROL

LEVEL

To decrease | To increase

Surr.L

-10dB

To decrease | To increase

ENTER

❸ Go to adjustment step "9".

MODE

Select the step "9" icon.

SLch +1 dB

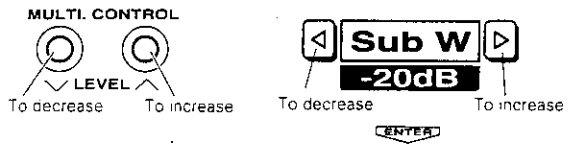
9 Adjust the subwoofer level. "SWch"

Main unit GRC

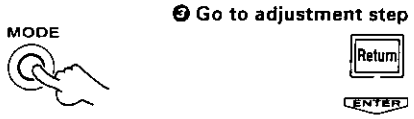
❶ **Confirm the Subwoofer adjustment display.**

(Select icon as required.)

❷ **Adjust the level as required.**



❸ **Go to adjustment step "⓮".**



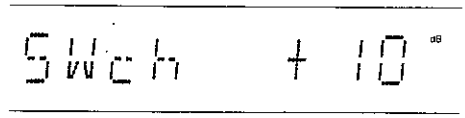
To skip an adjustment item

Main unit

- When an adjustment item is not required to be adjusted, press the **MODE** key to go to the next adjustment step.

GRC

- Select only the icons of the adjustment items which require adjustment.



- The level can be adjusted between -20 and +10 dB in steps of 1 dB.

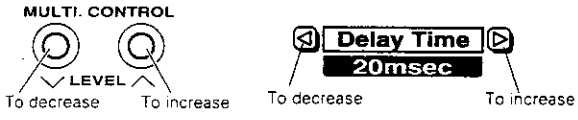
10 Adjust the delay time. "DELAY"

Main unit GRC

❶ **Confirm the display.**

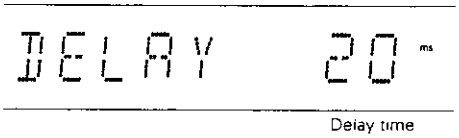
(Select icon as required.)

❷ **Adjust the delay time.**



❸ **Go to adjustment step "⓮".**

- Find the optimum delay time for the listening room by referring to "How to calculate the proper delay time". →31
- The delay time in the PRO LOGIC mode can be adjusted between 15 and 30 ms.
- The delay time in the AC-3 mode is automatically decreased by 15 ms from that set in the PRO LOGIC mode.
- Select the closest value to the value obtained by "How to calculate the proper delay time".



Delay time

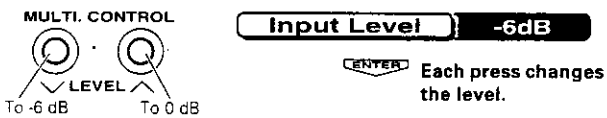
11 Adjust the input level. "INPUT"

Main unit GRC

❶ **Confirm the display.**

(Select icon as required.)

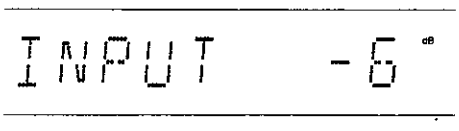
❷ **Set the input level.**



Each press changes the level.

If the **OVER LEVEL** indicator lights with analog input, set the input level to -6 dB to avoid sound distortion.

- The input level can be set to -6 dB or 0 dB.



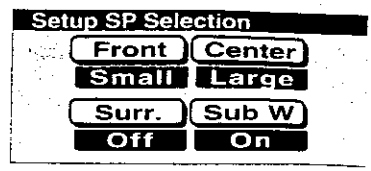
To quit the setup operation:

GRC

- If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.
- The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

Setup of other speakers than those used by system SERIES 21

The following setup operation is not required if the speakers provided with KENWOOD system SERIES 21 are used.
The following procedure is necessary when other speakers than those provided with system SERIES 21 or used or when you do not want to output sound from speakers.
After "Setup of the speaker sizes and speaker ON/OFF", execute the "Setup for surround play" (→30) again.



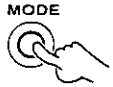
Main operation menu
(The displayed icons are variable depending on the mode.)

Setup of the speaker sizes and speaker ON/OFF

1 Select the speaker setup mode.

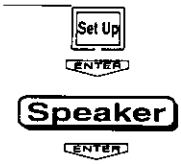
Main unit

MODE



Press and hold for more than 2 sec.

GRC



Main unit

Procedure : Press and hold the **MODE** key for more than 2 seconds. Press the **MULTI. CONTROL LEVEL UP** key repeatedly to switch the setup contents as shown below.

- **2 Subwoofer ON/OFF setup**
- **3 Front speaker size setup**
- **4 Center speaker size setup**
- **5 Surround speaker size setup**

Press the **MODE** key to abort setup in the middle.

2 Set up the subwoofer. "SW"

Main unit

❶ Select ON or OFF.

(Press the Down key)

MULTI. CONTROL

GRC

(Select icons.)

Each press changes the setup.

(Press the Up key)

MULTI. CONTROL

❷ Go to adjustment step "3".

Select the step "3" icon.

Main unit

Each press of the **MULTI. CONTROL LEVEL DOWN** key switches the Subwoofer ON and OFF.

GRC

Each press of the **ENTER** key switches the Subwoofer as shown below.

- **SW OFF** : Subwoofer Off
- **SW ON** : Subwoofer On

• When "SW" is set to OFF, "F" is automatically set to "LARGE".

3 Set the front speaker size. "F"

Main unit

❶ Select LARGE or SMALL.

(Press the Down key)

MULTI. CONTROL

GRC

(Select icons.)

Each press changes the setup.

❷ Go to adjustment step "4".

(Press the Up key)

Select the step "4" icon.

MULTI. CONTROL

Main unit

Each press of the **MULTI. CONTROL LEVEL DOWN** key switches the Front speaker size.

GRC

Each press of the **ENTER** key switches the Front speakers as shown below.

- **F LARGE** : Setup for large-sized front speakers
- **F SMALL** : Setup for small-sized front speakers

• When "SW" is set to ON and "F" is set to SMALL, "C" and "S" are set automatically SMALL even if they have been set to LARGE.

4 Set the center speaker size. "C"

Main unit **GRC**

❶ Select LARGE, SMALL or OFF.

(Press the Down key)

(Select icons.)

Each press changes the setup.

❷ Go to adjustment step "5".

(Press the Up key)

Select the step "5" icon.

Main unit

Each press of the **MULTI. CONTROL LEVEL DOWN** key switches the Center speaker size.

GRC

Each press of the **ENTER** key switches the Center speaker size as shown below.

1. **C LARGE** :Setup for large-sized center speaker
2. **C OFF** :Setup for not using the center speaker
3. **C SMALL** :Setup for small-sized center speaker

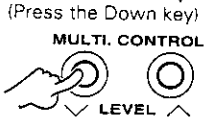
- When "SW" is set to ON and "F" is set to SMALL, "C" and "S" can be set only to SMALL or OFF.

5 Set the surround speaker size. "S"

Main unit **GRC**

❶ Select LARGE, SMALL or OFF.

(Press the Down key)



(Select icons.)

Each press changes the setup.

❷ Go to adjustment step "6".

(Press the Up key)

Select the step "6" icon.

Main unit

Each press of the **MULTI. CONTROL LEVEL DOWN** key switches the Surround speaker size.

GRC

Each press of the **ENTER** key switches the Surround speakers size as shown below.

1. **S LARGE** :Setup for large-sized surround speakers
2. **S OFF** :Setup for not using the surround speaker
3. **S SMALL** :Setup for small-sized surround speakers

- When "SW" is set to ON and "F" is set to SMALL, "C" and "S" can be set only to SMALL or OFF.

To quit the setup operation:

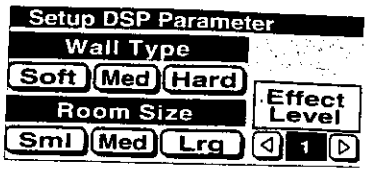
Main unit **GRC**

MODE

- The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

Notes for surround play

When the surround speakers are set to OFF in the middle of Dolby Pro Logic mode, this is automatically switched to the Dolby 3 Stereo mode.
When the center speaker is set to OFF in the middle of 3 STEREO mode, this is automatically switched to the normal STEREO mode.



Main operation menu
(The displayed icons are variable depending on the model.)

Setup of the surround effect parameters *(DSP)*

1 Select the DSP surround mode.

Main unit — **GRC**

❶ Select DSP.

(GRC only)

ENTER

DSP Mode

ENTER

- This can be selected when the input signal is other than Dolby Digital (AC-3).

Main unit

Each selection switches the indication.

1. **ARENA**
2. **JAZZ CLUB**
3. **STADIUM**
4. **CATHEDRAL**
5. **THEATER**

GRC

❶ Selection cursor

❷ Entry — ENTER

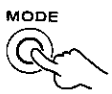
- The effects of adjustments are applied equally to sound fields 1 to 5.

2 Select the adjustment parameter.

Main unit — **GRC**

❶ Display the setup screen.

MODE



Set Up

ENTER

Sound

ENTER

DSP

ENTER

To quit the setup mode in the middle:
If no key has been pressed for about 5 seconds, the setup display disappears and the display returns to the status before the setup mode was entered.
(Main unit display)

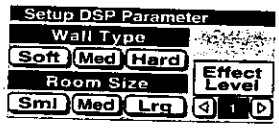
Main unit

Each press switches the adjustment parameters.

- **5 EFFECT**
  - **4 WALL**
  - **5 ROOM**
  - **6 BASS**
  - **7 TREBLE**
  - **8 L- - - - - - -R**
  - **9 Cch**
  - **10 SRch**
  - **11 SLch**
  - **12 SWch**
- **13 INPUT**

GRC

Select an adjustment parameter icon by moving the cursor.



- Setup/adjustment operations 6 to 13 are to be performed only when required.

3 Adjust the effect level. "EFFECT"

Main unit — **GRC**

❶ Confirm the "EFFECT" Level adjustment display.

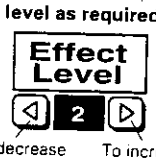
Select icon as required.

❷ Adjust the level as required.

MULTI. CONTROL

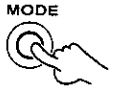
LEVEL

To decrease — To increase



To decrease — To increase

MODE



❸ Enter the setup.

ENTER

Select the step "4" icon.

Go to adjustment step "4".

- The EFFECT level can be adjusted between 1 and 5.

4 Set the WALL type. "WALL"

Main unit | GRC

❶ Confirm "WALL" adjustment display.

❷ Select the type.

MULTI. CONTROL

LEVEL

To move toward the left / To move toward the right

❸ Enter the setup.

MODE

ENTER

Select the step "5" icon.

Go to adjustment step "5".

Main unit

- Each press of the key switches the type setup as shown below.

S (SOFT) ⇄ M (MEDIUM) ⇄ H (HARD)

5 Set the ROOM size. "ROOM"

Main unit | GRC

❶ Confirm "ROOM" adjustment display.

❷ Select the size.

MULTI. CONTROL

LEVEL

To move toward the left / To move toward the right

❸ Enter the setup.

MODE

ENTER

Go to adjustment step "6".

Main unit

- Each press of the key switches the size setup as shown below.

S (SMALL) ⇄ M (MEDIUM) ⇄ L (LARGE)

To quit the setup mode in the middle:
If no key has been pressed for about 5 seconds, the setup display disappears and the display returns to the status before the setup mode was entered.

- Setup/adjustment operations 6 to 11 are to be performed only when required.
  The operations are identical to those in "Setup for surround play (while listening to music)". →34

To return the GRC display to the Main Menu:

GRC

Main Menu

ENTER

- If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.
- The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

Clock adjustment

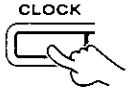
This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.

> **The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged in again. In such a case, adjust the clock again.**

1 Activate the clock adjustment mode.

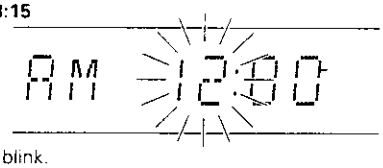
Main unit

CLOCK



❶ Enter the adjustment mode.

Example: Adjustment to 8:15

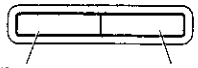


- The time display starts to blink.

2 Enter the hour.

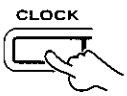
Main unit

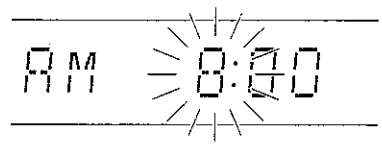
TUNING ❶ Set the "hour".



To decrease the figure — To increase the figure

CLOCK ❷ Enter it.



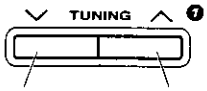


- The time is represented in 12-hour AM/PM method.
- Press the **CLOCK** key. The hour is entered and the minute display starts to blink.

3 Enter the minute.

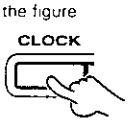
Main unit

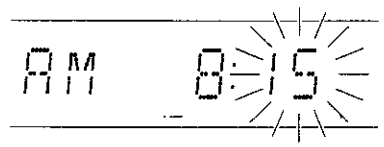
TUNING ❶ Set the "minute".



To decrease the figure — To increase the figure

CLOCK ❷ Enter it.





- If you make a mistake, restart from the beginning.
- To adjust correct time, press the **CLOCK** key at the same moment as a time announcement.

Displaying the Time

The displayed information can be switched every time the Display icon is selected.

GRC

Main Menu

ENTER

Main Menu

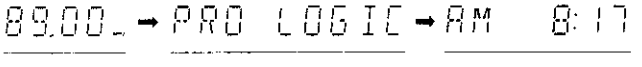
ENTER

Display

ENTER

Each press switches the indication.

- ① **Input selection display**
- ② **DOLBY/DSP/STEREO display**
- ③ **Clock display (about 5 seconds)**



Timer operation

Two 24-hour timer systems (TIMER 1, TIMER 2) (which can be used every day) and a sleep timer system (which works only once) are available.
In each of TIMER 1 and TIMER 2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.

Timer reservation is possible for the two types TIMER 1 and TIMER 2 at the same time.

- Please make reservations with an interval of at least one minute, so that the operation times of TIMER 1 and TIMER 2 do not overlap.

Timer playback, timer recording (TIMER 1, TIMER 2)

With each of the two timer programs, a selected source can be played (or radio broadcast can be recorded) in the previously set time period.

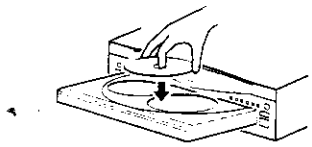
Sleep timer

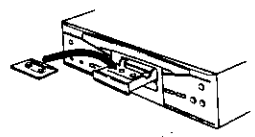
The unit is put to STANDBY mode automatically after the specified period has elapsed. – 46

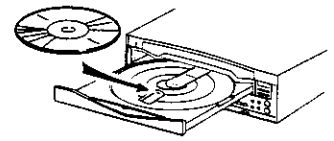
Timer programming

1 Make preparations for the play (recording).

• To listen to radio	• To listen to CD	• To listen to tape	• To listen to LD	• For broadcast recordings
The station should be preset before timer programming. – 25 – 26	**Insert a disc.** (Program playback is not possible.)	**Insert a tape.**	**Insert a disc.** (Program playback is not possible.)	**Make preparations for recording.** – 23





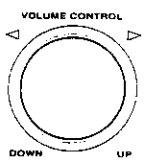


If tapes are inserted in both decks A and B, playback starts with the tape in deck B.

- **Timer operation of a MD recorder and/or DVD player is also possible when they are connected using the system control cords.**

2 Adjust the listening volume.

Main unit



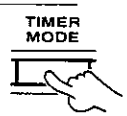
- The **VOLUME CONTROL** should be set to the desired volume while the unit is ON.

3 Set the POWER or I / ⏻ (ON/STANDBY) switch to STANDBY.

Main unit

4 Select a TIMER No.

Main unit

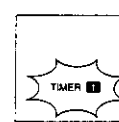


❶ **Select the timer number.**

❷ **Press immediately after selection.**

Each press of the key switches the TIMER numbers as follows.

1. **TIMER 1**
2. **TIMER 2**
3. **TIMER 1,2**
4. **OFF**



- The selected TIMER No. lights.
- If a previously programmed TIMER No. is selected, the contents will be replaced by the new contents programmed.
- The timer programming operation is not possible when TIMER 1,2 have already been selected.

5 Enter the ON time (Hour).

Main unit

TUNING

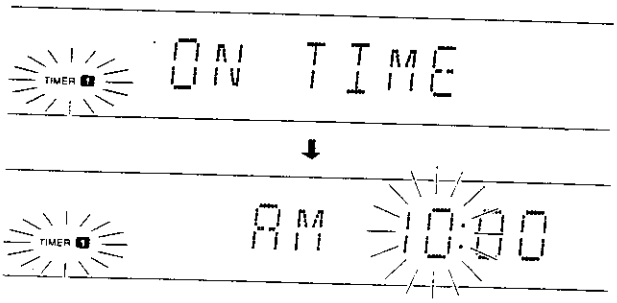
❶ Set the "hour".

To decrease the figure

To increase the figure

TIMER SET

❷ Enter it.



- If you make a mistake, restart from step 4.

6 Enter the On time (Minute).

Main unit

TUNING

❶ Set the "minute".

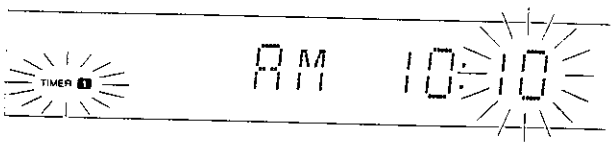
To decrease the figure

To increase the figure

TIMER SET

❷ Enter it.

- After entering the figure of "hour" with the procedure in step 5, enter the figure of "minute" using the same procedure.



- If you make a mistake, restart from step 4.

7 Enter the OFF time (Hour).

Main unit

TUNING

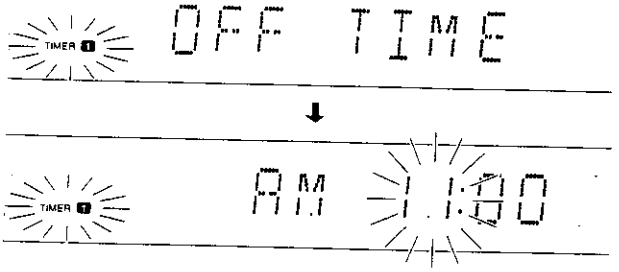
❶ Set the "hour".

To decrease the figure

To increase the figure

TIMER SET

❷ Enter it.



- If you make a mistake, restart from step 4.

8 Enter the OFF time (Minute).

Main unit

TUNING

❶ Set the "minute".

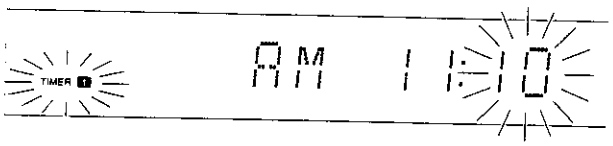
To decrease the figure

To increase the figure

TIMER SET

❷ Enter it.

- After entering the figure of "hour" with the procedure in step 7, enter the figure of "minute" using the same procedure.



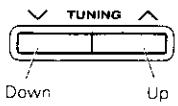
- If you make a mistake, restart from step 4.

9 Make the desired reservation.

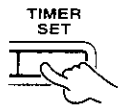
For timer playback

Main unit

❶ Select the mode.

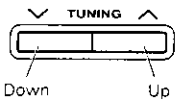


1 **Select "PLAY"**
(Each press alternates them.)
- **PLAY** : At the ON time, playback starts.
- **REC**

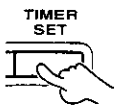


2 **Enter it.**

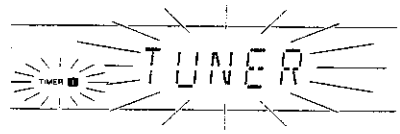
❷ Select the input source.



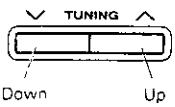
1 **Select the source to be played.**
(Each press switches the following).
- **TUNER**
- **CD**
- **LD -D**
- **LD -A**
- **TAPE1 / MD**
- **DVD-D**
- **DVD-A**



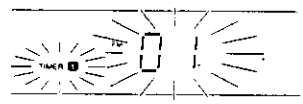
2 **Enter it.**

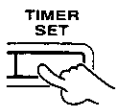


❸ Select the broadcast station (only when TUNER is selected above).



1 **Select the preset station No.**





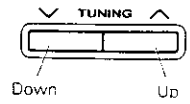
2 **Enter it.**

- The station to be received with timer must be preset beforehand. →25 →26

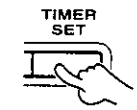
Timer recording of broadcasts

Main unit

❶ Select the mode.

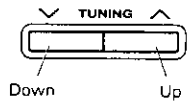


1 **Select "REC".**
(Each press alternates them.)
- **PLAY**
- **REC**

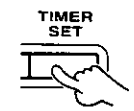


1 **Enter it.**

❷ Select the broadcast station.



1 **Select the preset station No.**

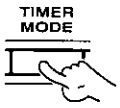


2 **Enter it.**

Activating the timer

1 Select the TIMER No.to be used.

Main unit



Each press of the key switches the **TIMER** numbers as follows.
- 1 **TIMER 1** ..... Execution of timer 1 only.
- 2 **TIMER 2** ..... Execution of timer 2 only.
- 3 **TIMER 1, 2** .. Execution of timers 1 and 2.
- 4 TIMER OFF

- The selected TIMER No. lights.
- The timer will not function unless a TIMER No. is selected.

Check the reservation content.

Main unit

TIMER MODE

Select the TIMER number to be checked.

The reservation contents cannot be cleared. The contents are cleared only when they are changed.

Each press of the key switches the **TIMER** numbers as follows

- 1 **TIMER 1** (Contents of the timer 1 are displayed.)
- 2 **TIMER 2** (Contents of the timer 2 are displayed.)
- 3 **TIMER 1, 2** (Contents of the timer 1 and timer 2 are displayed.)
- 4 TIMER OFF

- The reserved contents will be displayed for 2 seconds per item. After this, the previous display content appears again.

To change the reserved contents

Restart the procedure of "Timer programming" from the beginning.

When timer operation is not required

Main unit

TIMER MODE

Press so that all TIMER No. indicators are OFF.

Each press of the key switches the **TIMER** numbers as follows.

- 1 **TIMER 1** (Only the timer 1 is carried out.)
- 2 **TIMER 2** (Only the timer 2 is carried out.)
- 3 **TIMER 1,2** (Both timers 1 and 2 are carried out.)
- 4 TIMER OFF (No timer operation is carried out)

- The reservation contents are held in memory.

To set the same timer program again

Main unit

TIMER MODE

Press so that the desired TIMER No. indicators light.

Each press of the key switches the **TIMER** numbers as follows.

- 1 **TIMER 1** (Only the timer 1 is carried out.)
- 2 **TIMER 2** (Only the timer 2 is carried out.)
- 3 **TIMER 1,2** (Both timers 1 and 2 are carried out.)
- 4 TIMER OFF (No timer operation is carried out)

- Also prepare the disc or tape and adjust the listening volume.

Sleep timer

Setting the number of minutes until the unit is put to standby mode.

Main unit

GRC

ON/STANDBY

❶ Switch the unit from STANDBY mode to ON mode.

❷ Set the time.

Sleep

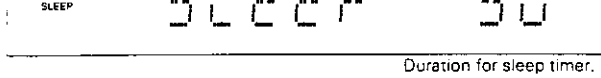
ENTER

- This unit is turned STANDBY automatically after the set time has elapsed.
- The remaining sleep time can be displayed by selecting the Sleep icon while the SLEEP indicator is lit.

- Each press decreases the time by 10 minutes. The maximum time that can be set is 90 minutes.

90→80→70...30→20→10→Cancel→90→80...

Lights up.



Duration for sleep timer.

To cancel

Turn STANDBY or select "Sleep" icon repeatedly until the sleep time is cancelled.

VCR Set up codes

Maker	Set up codes
Action	332
Admiral	063
Adventura	015
Aiko	293
Aiwa	015
Akai	056, 064, 068, 076, 121, 171, 257
American High	050
Amstrad	340
Asha	255
Audiovox	052
Beaumark	255
Bell & Howell	119
Brandt	202
Broksonic	136, 199, 226, 310, 376
Calix	052
Canon	050, 182
Capehart	035
Carver	096, 161
CCE	087, 293
Citizen	052, 293
Colt	087
Craig	052, 062, 087, 255, 286
Curtis Mathes	050, 056, 075
Cybernex	066, 255
Daewoo	032, 035, 060, 102, 293
Daytron	035
Dynatech	015
Electrohome	052
Electrophonic	052
Emerex	047
Emerson	015, 017, 051, 052, 058, 076, 083, 103, 136, 199, 223, 224, 226, 227, 293, 309, 310, 376
Fisher	062, 069, 081, 119
Fuji	048, 050
Funai	015
Garrard	015
GE	050, 075, 080, 217
Go Video	247, 294
GoldStar	033, 052, 053
Gradiente	015
Harley Davidson	015
Harman/Kardon	053, 090
Harwood	083, 087
Headquarter	061
HI-Q	062

Maker	Set up codes
Hitachi	056, 057, 080, 097, 120, 160, 181, 250
Jensen	056
JVC	023, 056, 082, 399
KEC	052, 293
Kenwood	053, 056, 082, 399
KLH	087
Kodak	050, 052
Lloyd	015
Lloyd's	223
Logik	087
LXI	052
Magnavox	050, 054, 096, 118, 125, 164
Magnin	255
Marantz	050, 096, 161
Marta	052
Matsushita	050, 177, 469
MEI	050
Memorex	015, 050, 052, 054, 061, 062, 063, 119, 255, 283, 314
MGA	058, 076
MGN Technology	255
Minolta	057, 120
Mitsubishi	058, 076, 082, 090, 188, 229, 257
Motorola	050, 063
MTC	015, 255
Multitech	015, 087
NAD	073
NEC	053, 055, 056, 065, 082, 097, 119
Nikko	052
Nikon	049, 268
Noblex	255
Olympus	050, 241
Optimus	052, 063, 073, 119, 177, 447, 469
Optonica	077
Orion	310
Panasonic	050, 092, 177, 240, 241, 469
Penney	050, 052, 053, 055, 057, 069, 255
Pentax	057, 080, 120
Philco	050
Philips	050, 077, 096, 125
Pilot	052
Pioneer	073, 082
Portland	035
Profitronic	255

Maker	Set up codes
Protec	087
Pulsar	054, 066
Quarter	061
Quartz	061
Quasar	050, 092, 177, 469
Radio Shack	015, 052
Radix	052
Randex	052
RCA	057, 075, 080, 092, 120, 121, 164, 217
Realistic	015, 050, 052, 061, 062, 063, 077, 081, 119
Ricoh	049, 268
Runco	054
Saisho	160
Salora	090
Samsung	060, 066, 068, 255
Sanky	054, 063
Sansui	056, 082, 097, 286
Sanyo	061, 062, 119, 255, 283
Scott	058, 060, 136, 199, 225, 226, 227
Sears	050, 052, 057, 061, 062, 069, 072, 081, 119, 120
Sharp	063, 077
Shintom	087
Shogun	066, 255
Singer	087
Sony	026, 047, 048, 049, 050, 268
STS	057
Sunpak	268
Sylvania	015, 050, 058, 096, 118, 125
Symphonic	015
Tatung	056
Teac	015, 056
Technics	050, 177
Teknika	015, 050, 052, 067
Telefunken	202
TMK	051, 223, 255
Toshiba	058, 060, 072, 081, 225, 227
Totevision	052, 255
Unitech	255
Universum	340
Vector	060
Vector Research	053, 055
Video Concepts	055, 060, 076

48 VCR Set up codes

Maker	Set up codes
Videosonic	255
Wards	015, 050, 057, 062, 063, 075, 077, 087, 096, 164, 227, 255
XR-1000	015, 050, 087
Yamaha	053
Zenith	048, 049, 054

TV Set up codes

Maker	Set up codes
A-Mark	018
Abex	047
Admiral	108
Adventura	061
Aiko	107
Akai	045, 113
Akura	233
Alaron	231
Alba	052, 233
Alleron	194, 198
Ambassador	192
Ampro	766
Anam	019, 024, 083, 195
Anam National	070
AOC	018, 034, 045, 067, 152, 200
Archer	018
Asuka	233
Audiosonic	052
Audiovox	018, 195
Basic Line	233
Baur	052
Belcor	034
Bell & Howell	031, 169
Beon	052
Blue Sky	233
Bradford	195
Brockwood	034
Broksonic	018
BTC	233
Bush	052, 233
Candle	045, 061, 071, 201
Carnivale	045
Carver	069, 185
Cathay	052
CCE	232
Celebrity	015
Centurion	052
Citizen	045, 054, 061, 071, 075, 107, 201, 295
Clairtone	200
Clarivox	052
Concerto	071
Contec	172, 173, 195, 200
Craig	195
Crown	052, 054, 195
Curtis Mathes	045, 054, 075, 169, 430
CXC	195
Cybertron	233

Maker	Set up codes
Daewoo	034, 052, 054, 106, 107, 466
Dainichi	233
Dansai	052
Daytron	034
Decca	052, 087
Dixi	052
Dumont	032, 034
Dwin	735, 789
Dynatech	064
Electroband	015, 200
Electrohome	396, 404, 424
Elin	052
Elite	233
Emerson	034, 053, 054, 169, 173, 192, 193, 194, 195, 196, 197, 198, 200, 251, 285, 295, 297, 478
Envision	045
Erres	052
Ferguson	052
Fidelity	097
Finlux	052, 087
Fisher	169, 174
Formenti	052
Fujitsu	087, 194
Funai	186, 194, 195
Futuretech	195
GE	036, 042, 044, 062, 066, 070, 150, 189, 193, 297, 466
GEC	052, 087
Genexxa	233
Gibralter	032, 034, 045
GoldStar	016, 017, 034, 045, 047, 052, 054, 071, 121, 193, 424
Goodmans	052, 087
GPM	233
Granada	052, 087
Grunpy	194, 195
Hallmark	193
Hanseatic	052
Harman/Kardon	093
Harvard	083, 195
Hinari	052, 233
Hitachi	047, 053, 071, 110, 112, 160, 166, 188, 242, 424
Hypson	052
Indiana	052

TV Set up codes

Maker	Set up codes
Infinity	069
Inno Hit	087
Interfunk	052
Isukai	233
Janeil	061
JBL	069
JCB	015
Jensen	065
JVC	051, 068, 197
Kaisui	233
Kamp	231
Kawasho	173, 231
Kaypani	067
KEC	195
Kendo	052
Kenwood	034, 045
Kloss	039, 061, 093
KMC	121
Korpel	052
KTV	045, 054, 195, 198, 200, 232, 295
Leyco	052, 087
Liesenk & Tter	052
Logik	031
Luxman	071
LXI	062, 069, 163, 169, 171, 193
M Electronic	052
Magnavox	035, 039, 043, 045, 051, 069, 111, 201, 202, 245
Majestic	030, 031
Marantz	045, 052, 069
Mark	052
Matsui	052, 087
Matsushita	265
Mediator	052
Megatron	018, 160, 193
MEI	200
Memorex	031, 071, 121, 165, 169, 193
MGA	034, 045, 165, 170, 193
Midland	032, 047, 054, 062, 066, 150
Minutz	036
Mitsubishi	034, 108, 113, 165, 170, 193, 256
Motorola	070, 108
MTC	034, 045, 064, 071, 075, 106, 200, 231
Multitech	064, 195, 232

Maker	Set up codes
NAD	171, 181, 193
NEC	034, 045, 051, 071, 185, 512,
Neckermann	052
NEI	052
Nikkai	052, 087, 233
Nikko	045, 107, 193
Noshi	033
NTC	107
Onwa	195
Optimus	169, 181, 265
Optonica	108, 180
Orion	052, 251
Osaki	087, 233
Oso	233
Osume	087
Otto Versand	052
Panasonic	066, 070, 177, 265, 353
Penney	017, 018, 033, 034, 036, 042, 045, 047, 054, 062, 066, 075, 125, 150, 164, 171, 193
Philco	034, 035, 043, 045, 069, 111
Philips	052, 069
Phonola	052
Pilot	034, 045, 054
Pioneer	053, 181, 187
Portland	034, 054, 107
Prism	066
Proscan	062
Protech	052
Proton	018, 046, 067, 193, 481
Pulsar	032, 034
Quasar	066, 070, 180, 234, 265
Quelle	052
R-Line	052
Radio Shack	034, 045, 047, 054, 062, 071, 169, 180, 193, 195, 424
Radiola	052
RCA	033, 034, 044, 053, 062, 105, 150, 189, 293
Realistic	034, 045, 047, 054, 071, 169, 180, 193, 195
Revox	052
Rhapsody	198, 200, 231

Maker	Set up codes
Roadstar	233
Runco	032, 045, 512, 618
Sampo	045, 047, 054, 067, 115, 125
Samsung	034, 045, 047, 052, 054, 071, 075, 125, 193
Samsux	054
Sanyo	087, 161, 169, 174
SBR	052
Schneider	052, 233
Scimitsu	034
Scotch	193
Scott	034, 193, 194, 195, 251
Sears	030, 062, 069, 071, 161, 163, 164, 169, 171, 174, 183, 186, 193, 194
Sharp	054, 108, 168, 172, 180, 506
Shogun	034
Siemens	052
Signature	031
Simpson	201, 202
Sonoko	052
Sontec	052
Sony	015, 026, 095, 126, 288, 368
Soundesign	193, 194, 195, 201
Soundwave	052
Spectricon	018, 152
Squareview	186
SSS	034, 195
Standard	233
Starlite	195
Supre-Macy	061
Supreme	015
Susumu	233
Sylvania	035, 043, 045, 069, 080, 111, 396
Symphonic	186
Sysline	052
Tandy	087, 108, 233
Tatung	018, 052, 064, 070, 087
Technics	066, 265
Technol Ace	194
Techwood	018, 066, 071
Teknika	031, 034, 054, 069, 071, 075, 107, 165, 194, 195, 201, 337
Tensai	233

50 TV Set up codes

Maker	Set up codes
Tera	046
Texet	233
Thorn	052, 087
TMK	071, 192, 193
Toshiba	051, 075, 164, 169, 171
Tosonic	200
Totevision	054
Trical	172
Ultra	406
Universal	042
Universum	052
Vector Research	045
Vestel	052
Victor	068
Video Concepts	113
Vidikron	069, 257
Vidtech	034, 051, 193
Viking	061
Wards	031, 034, 035, 036, 042, 043, 044, 045, 069, 071, 095, 111, 126, 180, 189, 193, 194
Watson	052
White Westinghouse	052
Yamaha	034, 045
Yoko	052
Zenith	031, 032
Zonda	018

Cable Set up codes

Maker	Set up codes
ABC	016, 018, 022, 023, 026, 028, 029, 032, 062
Allegro	168
Antronix	037, 222
Archer	037, 054, 168, 222
Belcor	071
Cable Star	071
Cabletenna	037
Cableview	037
Century	168
Citizen	168
Colour Voice	040, 046
Comband	247, 248
Comtronics	055, 075
Contec	034
Eastern	017
Electricord	093
Everquest	030, 055
Focus	415
Garrard	168
GC Electronics	071, 222
GE	247, 248
Gemini	030, 072, 085, 257
General Instrument	026, 291, 491
GoldStar	055, 159
Hamlin	024, 035, 049, 274, 288
Hitachi	026
Hytex	022
Jasco	168
Jerrold	018, 026, 027, 029, 030, 039, 062, 113, 291, 491
Linsay	455
Macom	048
Magnavox	042
Memorex	015
Movie Time	078, 093, 171, 218
Northcoast	329
NSC	078, 085, 171, 218
Oak	022, 034, 263
Panasonic	015, 036, 122
Panther	652
Paragon	015
Philips	040, 042, 043, 044, 045, 046, 168, 257, 305
Pioneer	038, 159, 275, 548
Popular Mechanics	415
Pulsar	015

Maker	Set up codes
Radio Shack	030
RCA	036
Realistic	222
Recoton	415
Regal	035, 274, 288, 294
Regency	017
Rembrandt	026, 085
RK	321
Runco	015
Samsung	055, 159
Scientific Atlanta	021, 023, 032, 292, 492
Seam	525
Signal	030, 055
Signature	026
SL Marx	055
Sprucer	036, 322
Standard Components	111, 170
Starcom	018, 030, 062, 113
Stargate	030, 055
Starquest	030
Sylvania	016
Tandy	273
Tatung	112
Teknika	161
TeleCaption	236
Teleview	055
Texscan	016, 111
Timeless	433
Tocom	027, 028, 074
Toshiba	015
Tusa	030
TV86	078
Uniden	240
Unika	037, 168, 222
United Artists	022
United Cable	018
Universal	037, 054, 071, 092, 093, 168, 206, 222, 337
Videoway	265
Vidtech	259
Viewstar	042, 075, 078, 126, 226, 273, 304
Zenith	015, 069, 540
Zentek	415

Satellite Set up codes

Maker	Set up codes
Amplica	087
Amway	058, 090
Astro Industries	110
Birdview	060, 094
BSR	110
Cable Innovations	569
Capetronic	110
Century	553
Channel Master	033, 227
Chaparral	068, 224
Citoh	179
Conifer	019
Connexions	411
Curtis Mathes	076, 087
DNT	411
Drake	033, 077, 079, 081, 164, 165, 260
DX Antenna	056
Echostar	115, 163, 174, 185, 233, 284, 295, 327, 411, 469
Equus	196
Fuba	411
Fujitsu	201, 251
General Instrument	053, 065, 376, 569
Gould	070
Homecable	253
Hytek	110
Intersat	058
IQ	225
IQ Prism	225
Janeil	167
Jerrold	051, 376
Kenwood	279, 371
Legend	284
Macom	033, 065, 076
Memorex	284
NEC	117
Norsat	019
Panasonic	167
Philips	215
Pico	090
Primestar	376
Prosat	173
Radio Shack	569
Radix	411
Ramsey	090
Realistic	066, 067
Salora	197
Scientific Atlanta	249, 370
Seemann	411

Maker	Set up codes
Star Trak	195, 436, 562
Starcast	057
Strong	436
STS	056, 205, 225
SuperGuide	326
Toshiba	076, 097
Uniden	067, 089, 091, 253, 311, 385, 569
Wisi	411
Zenith	076, 079

DSS Set up codes

Maker	Set up codes
AlphaStar	772
Echostar	775
Hitachi	819
HTS	775
Hughes Network Systems	749
Jerrold	627
Panasonic	701
Primestar	627
RCA	566
Sony	639
Toshiba	790

LD Set up codes

Maker	Set up codes
Aiwa	218
Carver	079, 209, 338
Denon	187, 245, 256
Disco Vision	038
Funai	218
Hitachi	038
Kenwood	251, 273
Magnavox	209, 232, 256
Marantz	079, 209
Mitsubishi	074
NAD	074
NEC	301
Panasonic	219
Philips	079, 209
Pioneer	038, 074
Quasar	219
RCA	143, 366
Realistic	218
Samsung	338
Sega	038
Sharp	016
Sony	208, 216, 285
Theta Digital	209
Yamaha	232

In case of difficulty

What appears to be a mulfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can corrected before seeking help from your dealer or service representative.

How to reset the microcomputer

The microcomputer may malfunction (impossibility of operation, erroneous display, etc.) when the power cord is unplugged and plugged in again while the unit is in ON mode with the I/⏻ key pressed or due to other external causes. In this case, execute the procedure on the right to reset the microcomputer and return the unit to the normal condition.

1 Unplug the power cord from the wall outlet.
2 While pressing and holding the POWER or I/⏻ (ON/STANDBY) key, plug the AC cord into the wall outlet again.

- Resetting the microcomputer clears the memory you entered and returns it to the initial condition when the unit left the factory

Amplifier

Symptom	Cause	Remedy
Sound is not output or the volume level is low.	• Connection cords are unplugged from the jacks. • MUTE is ON. (The MUTE ON indicator is blinking) • The **TAPE 2 (MONITOR)** key is set to ON. • The selected surround mode does not match the input signal.	• Connect them properly referring to "System connections". –5, –8 • Press the **MUTE** key to OFF. –22 • Set the **TAPE 2 (MONITOR)** key to OFF. • Select the surround mode according to the input signal. –33
"PROTECT" blinks and sound is not output.	• Speaker cords are short-circuited.	• Unplug the AC cord, remove the short-circuiting and plug the AC cord again.
Sound is not output from one of the speakers.	• The BALANCE control is set to an extreme position.	• Adjust the Left/Right balance. –21
Sound is not output from the surround speaker and/or center speaker, or their sound is very small.	• The surround speaker cords and/or center speaker cord are disconnected. • The Surround play mode has not been engaged. • The surround and center speaker levels are set to the minimum positions.	• Connect them by referring to the power amplifier's instruction manual. • Set the presence mode. –32 • Adjust the surround and center speaker levels.
System control is not available when TAPE1 or MD is selected.	• "TAPE1" or "MD" is not displayed.	• Switch the display to "TAPE 1" or "MD". –10
System control is not available when DVD is selected.	• "DVD" is not displayed.	• Switch the display to show "DVD". –10
System control is impossible.	• System control cords are connected incorrectly.	• Connect them correctly by referring to "System connection".

Tuner

Symptom	Cause	Remedy
Radio stations cannot be received.	• No antenna is connected. • The broadcast band is not set properly. • The frequency of the desired station is not tuned.	• Connect an antenna. –9 • Set the broadcast band properly. –24 • Tune the frequency of the desired station. –24
Interference.	• Noise due to ignition noise of an automobile. • Noise due to an influence from an electric appliance. • Noise due to a nearby TV set.	• Install the outdoor antenna away from the road. • Turn off the power to the appliance. • Install the system farther away from the TV set.
A station which was preset cannot be received by pressing the corresponding numeric key.	• The preset memory was cleared because the power cord had been unplugged for a long period of time. • The TUNER input is not selected.	• Preset the stations by auto memory again. –25 • Select the TUNER input.

Note

Donot use contact cleaning agents because they could case a malfunction. Be specifically careful against using contact cleaning agents containing oil, since they may deform the plastic components.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	• Batteries are exhausted. • The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. • The audio cords and system control cords are not connected properly. • The source component to be operated does not contain the tape(s) or disc.	• Replace with new batteries. →13 • Operate the remote control unit within the controllable range. →12 • Connect properly referring to "System connection". →5 – 8 • Place the tape(s) or disc in the source component to be played.
The GRC screen is not displayed.	• Batteries are exhausted.	• Replace with new batteries. →13
The GRC display is abnormal.	• Batteries are removed while something is displayed.	• Remove and replace batteries after the information display has disappeared.

Set up code chart

Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.)
With some models, be sure to keep the ENTER key pressed for a while.

Memory backup function

Please note that the following items will be deleted from this unit's memory if the power cord is disconnected from the AC outlet for approximately three days.

- The input selection is cleared and the TUNER input is selected.
- The volume setting is cleared and the volume is set to -65 dB.
- The receiving band setting is cleared and the FM band is selected.
- The frequency setting is cleared and 87.5 MHz is selected.
- The preset station memory is cleared.
- The surround setting is cleared and reset to the initial condition.
- The clock and timer setup is cleared and the clock display shows AM 12:00 which is blinking.

For the U.S.A.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio / TV technician for help.

For the U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Specifications

⚠ *Caution : Read this page carefully to ensure safe operation.*

For C-V500 *(U.S.A. and Canada)*

Audio section

Total harmonic distortion (1 kHz, 1V) ..... 0.01 %
Signal to noise ratio (IHF'66)
CD ..... 98 dB
Input sensitivity / impedance
CD ..... 200 mV / 47kΩ
Tone controls
BASS ..... ± 8 dB (at 100 Hz)
TREBLE ..... ± 8 dB (at 10 kHz)
Output level / impedance
TAPE REC ..... 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs
(composite) ..... 1 Vp-p/75 Ω

Digital section

Sampling frequency ..... 32 kHz,44.1 kHz,48 kHz
Digital input
(coaxial) ..... 0.5 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz
Usable sensitivity
MONO ..... 1.6 µV (at 75 Ω) / 15.2 dBf
(75 kHz dev., SINAD. 30 dB)
50dB quieting sensitivity
STEREO ..... 31.6 µV (at 75 Ω) / 41.2 dBf
(75 kHz dev.)
Signal to noise ratio (1 kHz, 75 kHz dev.)
MONO ..... 75 dB (65.2 dBf input)
STEREO ..... 68 dB (65.2 dBf input)
Selectivity (IHF ± 400 kHz) ..... 70 dB
Stereo separation (1 kHz) ..... 40 dB
Frequency response ..... 30 Hz~15 kHz, + 0.5 dB, – 3.0 dB

AM Tuner section

Tuning frequency range ..... 530 kHz ~ 1,700 kHz
Usable sensitivity
(30% mod., S/N 20 dB) ..... 16 µV / (600 µV / m)
Signal to noise ratio
(at 30% mod. 1mV input) ..... 48 dB

General

Power consumption ..... 35 W
⚠ AC outlet
UN SWITCHED ..... 2: (Total 100 W max)
Dimensions ..... W:400 mm (15-3/4")
H:106 mm (4-3/16")
D:382 mm (15-1/16")
Weight (net) ..... 4.4 kg (9.7 lb)

For C-V500 *(Other countries)*

Audio section

Total harmonic distortion (1 kHz, 1V) ..... 0.01 %
Signal to noise ratio (IHF'66)
CD ..... 98 dB
Input sensitivity / impedance
CD ..... 200 mV / 47kΩ
Tone controls
BASS ..... ± 8 dB (at 100 Hz)
TREBLE ..... ± 8 dB (at 10 kHz)
Output level / impedance
TAPE REC ..... 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs
(composite) ..... 1 Vp-p/75 Ω

Digital section

Sampling frequency ..... 32 kHz,44.1 kHz,48 kHz
Digital input
(coaxial) ..... 0.5 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz
Usable sensitivity
MONO ..... 1.6 µV (at 75 Ω) / 15.2 dBf
(75 kHz dev., SINAD. 30 dB)
50dB quieting sensitivity
STEREO ..... 31.6 µV (at 75 Ω) / 41.2 dBf
(75 kHz dev.)
Signal to noise ratio (1 kHz, 75 kHz dev.)
MONO ..... 75 dB (65.2 dBf input)
STEREO ..... 68 dB (65.2 dBf input)
Selectivity (IHF ± 400 kHz) ..... 50 dB
Stereo separation (1 kHz) ..... 40 dB
Frequency response ..... 30 Hz~15 kHz, + 0.5 dB, – 3.0 dB

AM Tuner section

Tuning frequency range ..... (9 kHz) 531 kHz ~ 1,602 kHz
(10 kHz) 530 kHz ~ 1,610 kHz
Usable sensitivity
(30% mod., S/N 20 dB) ..... 16 µV / (600 µV / m)
Signal to noise ratio
(at 30% mod. 1mV input) ..... 48 dB

General

Power consumption ..... 35 W
⚠ AC outlet
UN SWITCHED ..... 2: (Total 100 W max)
Dimensions ..... W:400 mm
H:106 mm
D:382 mm
Weight (net) ..... 4.4 kg

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg.C).

KENWOOD

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model_____ Serial Number_____

Simplified connection

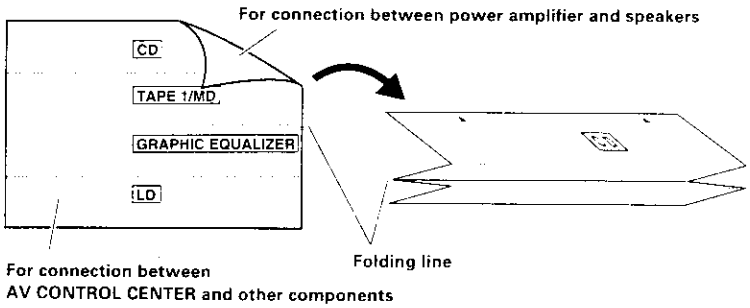
STEP 1

You can connect components only if you know the following basic information.

Connection between AV CONTROL CENTER and other components

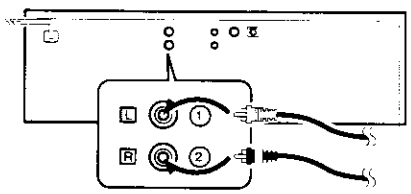
1 *Fold the template for use in connection between the AV CONTROL CENTER and other components.*

- Template: Provided with the AV CONTROL CENTER.

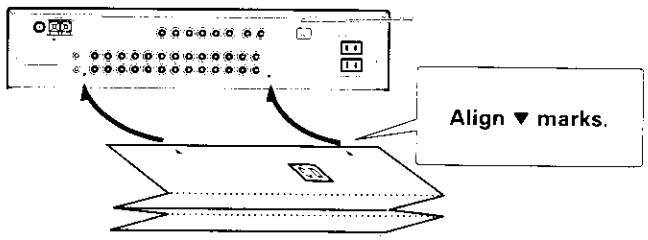


2 *Connect the connection cord to the CD player.*

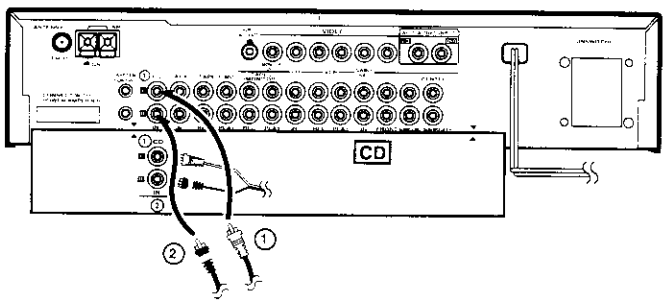
- If the CD player is not provided, connect the connection cord of another component.
- Connection cord: Provided with each component.



3 *Place the template for the component connected in step 2 on the rear panel of the AV CONTROL CENTER.*



4 *Connect the connection cord to the AV CONTROL CENTER jacks which have the same numbers as the jacks connected in step 2.*



5 *Connect another component by repeating steps 2 to 4 for it.*

6 *Connect the antennas and parallel cord.*

- Antenna cords: Provided with the AV CONTROL CENTER.
- Parallel cord: Provided with the power amplifier.

AM antenna: After connecting to the AV CONTROL CENTER, locate the antenna to the position providing the best receiving sensitivity.

FM antenna: After connecting to the AV CONTROL CENTER, fix the antenna on a wall position providing the best receiving sensitivity.

Parallel cord: Connect to the parallel cord connectors of the AV CONTROL CENTER and power amplifier.

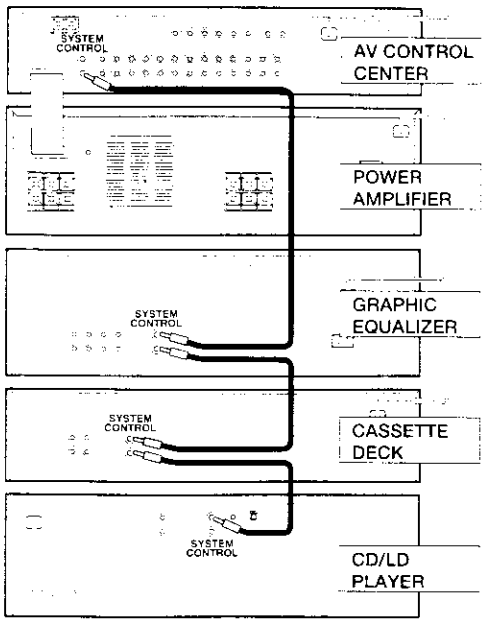
Connection between power amplifier and speakers

Use the template for connection between the amplifier and speakers and connect them with the same procedure as above.

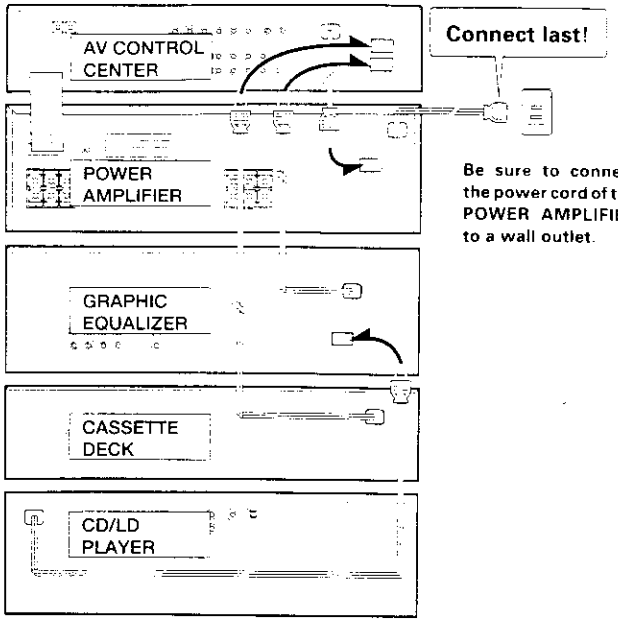
Simplified connection

STEP 2

Connection of system control cords



Connection of power cords



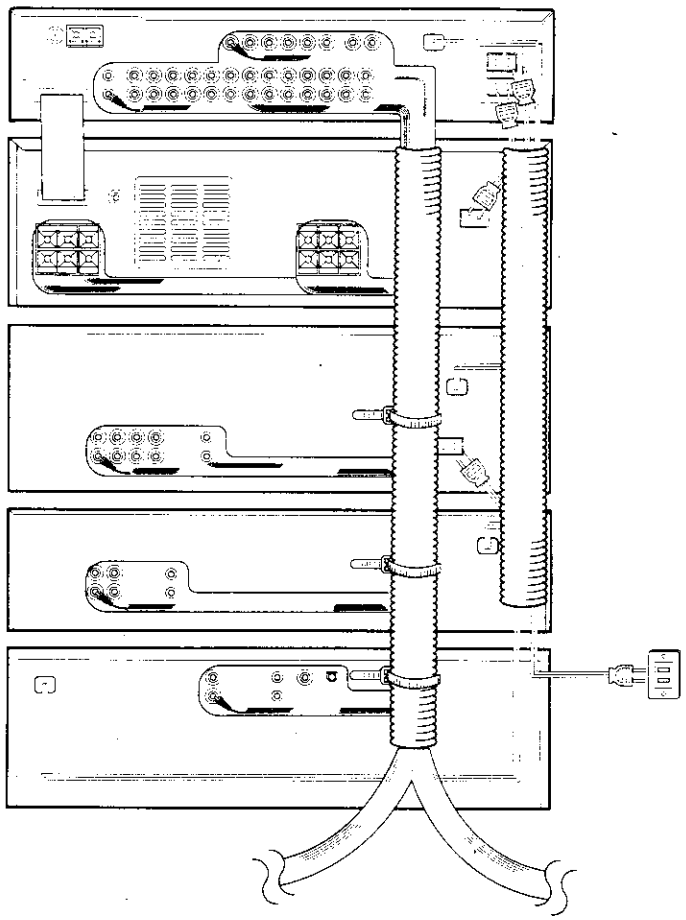
Be sure to connect the power cord of the POWER AMPLIFIER to a wall outlet.

• The connected components shown here are given as examples because available models vary depending in marketing areas.

Distributing connection cords together

STEP 3

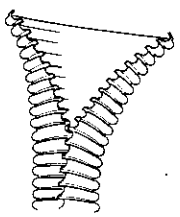
Recommended stacking example



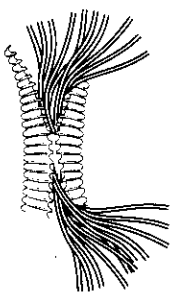
How to use Cable Tidy

• Cable Tidy: Provided with the AV CONTROL CENTER

1 **Open.**



2 **Pass cords through the openings.**



Simplified operation

You can play music only if you know the following basic information.

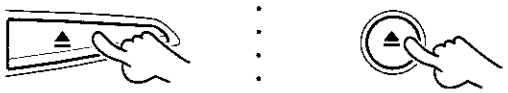
Preparation

❶ Set the POWER switches of the component which have the POWER switches (i.e. power amplifier, cassette deck and LD player).
❷ Switch the AV CONTROL CENTER from STANDBY to ON mode.

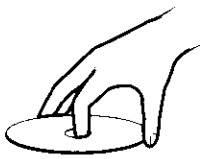
Playing a CD

1 Load a CD.

❶ Open the tray.



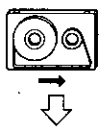
❷ Place a disc and close the tray.



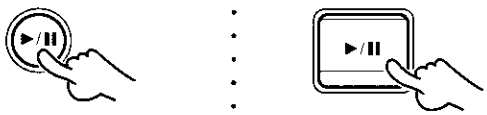
2 Play the CD.

Recording a CD onto tape

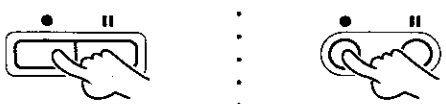
❶ Load a recordable tape in the cassette deck.



❷ Press the play key of the CD player to play a CD.



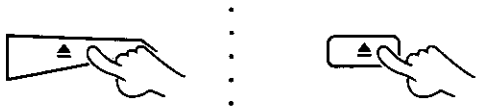
❸ Press the record key of the cassette deck to start recording.



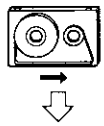
Playing a cassette tape

1 Load a cassette tape.

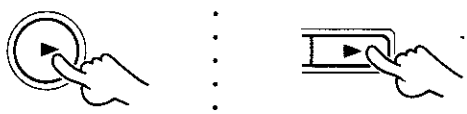
❶ Press the eject button ▲.



❷ Insert a tape and close the cassette holder.



2 Play the tape.



● For the details of the recording procedure, refer to the instruction manual of the cassette deck.

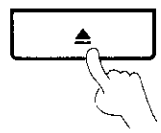
Simplified operation

As the key design is variable depending on the component models, the following illustrations shows typical examples of key designs.

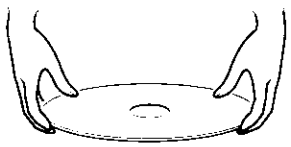
Playing a LD

1 Load a LD.

❶ Open the tray.



❷ Place a disc and close the tray.



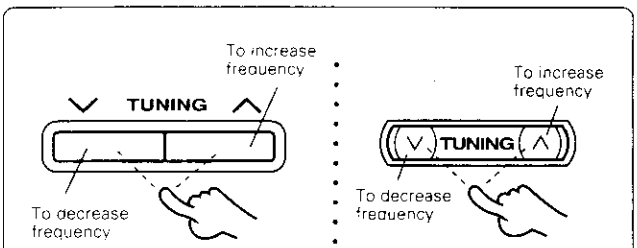
2 Play the LD.

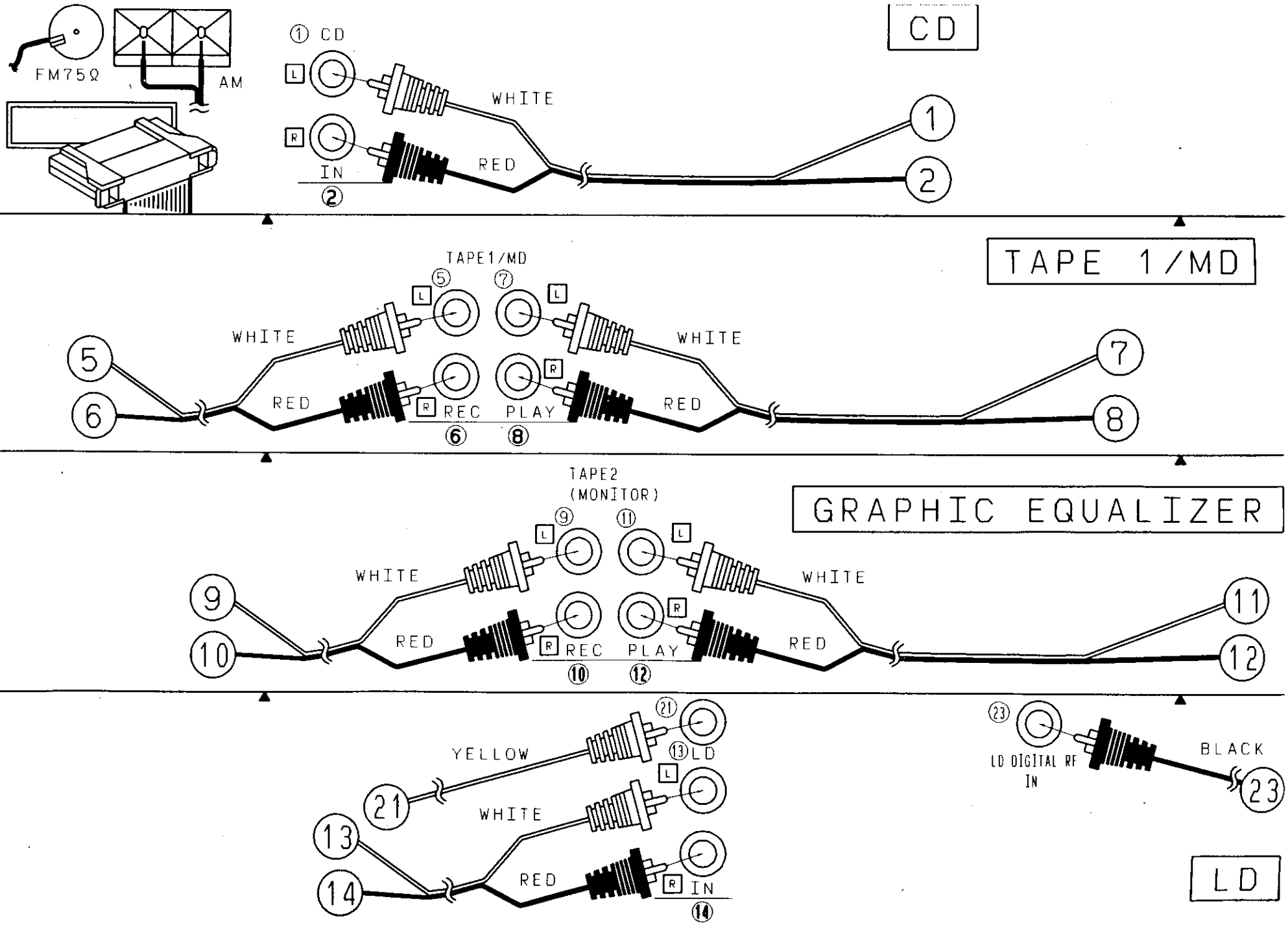
Receiving radio broadcasting

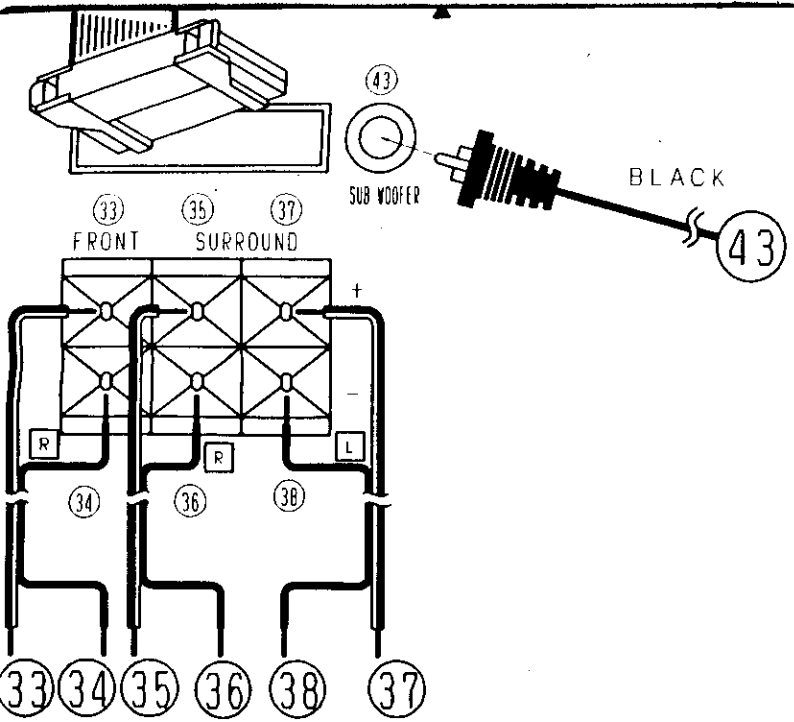
1 Select the broadcast band.

2 Select AUTO tuning.

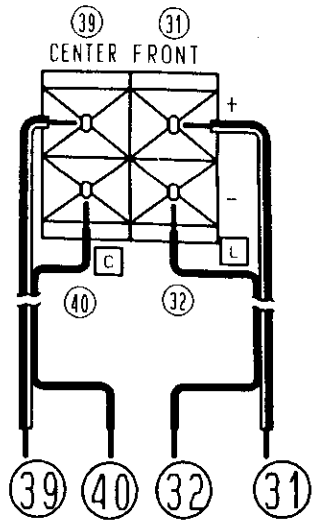
3 Select a station.

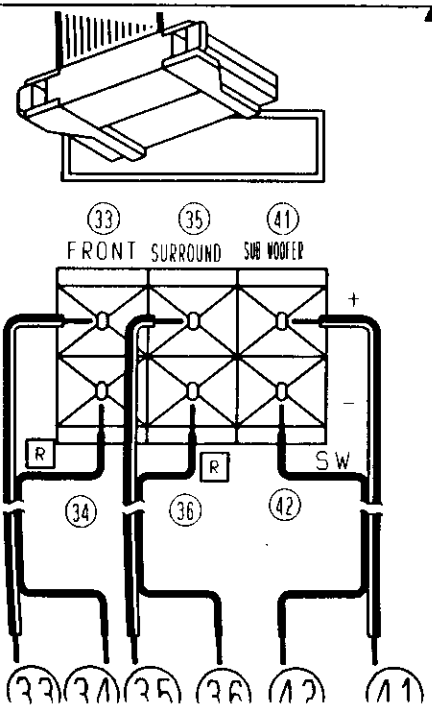



FM75Ω
AM
① CD
L
R
IN
②
WHITE
RED
1
2
CD
TAPE1/MD
⑤
⑦
L
R
WHITE
RED
REC
PLAY
⑥
⑧
5
6
7
8
TAPE 1/MD
TAPE2
(MONITOR)
⑨
⑪
9
10
11
12
GRAPHIC EQUALIZER
⑩
⑫
⑬LD
21
13
14
YELLOW
IN
⑭
23
LD DIGITAL RF
IN
BLACK
LD


43
SUB WOOFER
BLACK
43
33
35
37
FRONT
SURROUND
+
R
R
L
−
34
36
38
33
34
35
36
38
37

M-A100


39
31
CENTER
FRONT
+
C
L
−
40
32
39
40
32
31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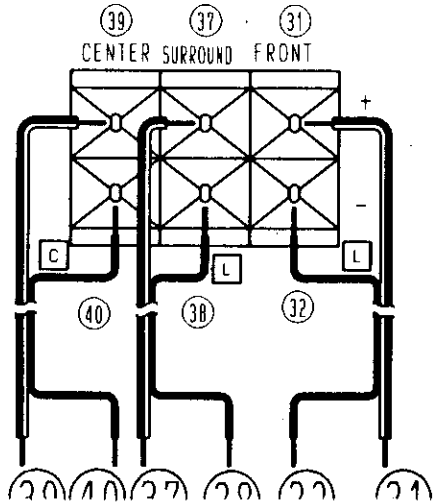
M-A300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31
CENTER
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